FINE ARTS DEPT. S

THIRD SERIES VOL 64 NUMBER 2 DECEMBER 1956

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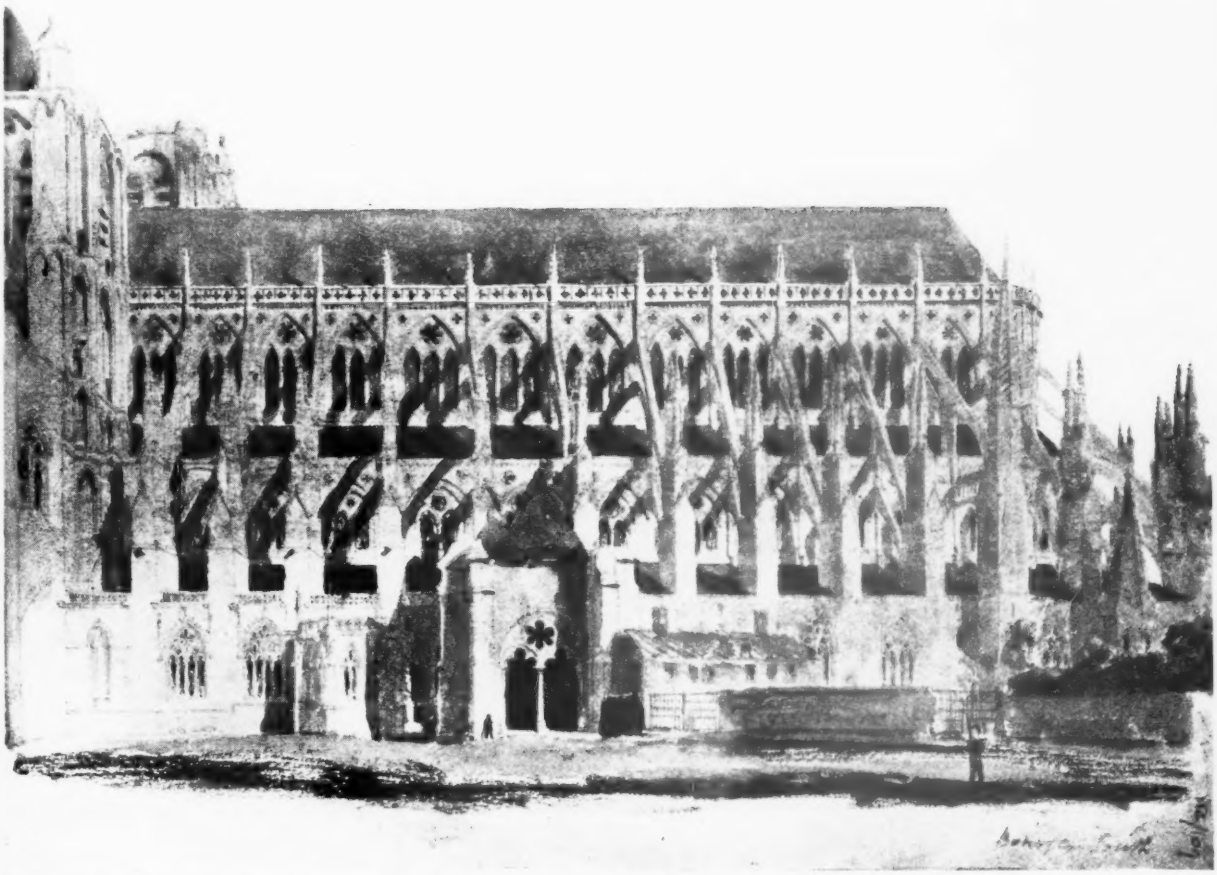
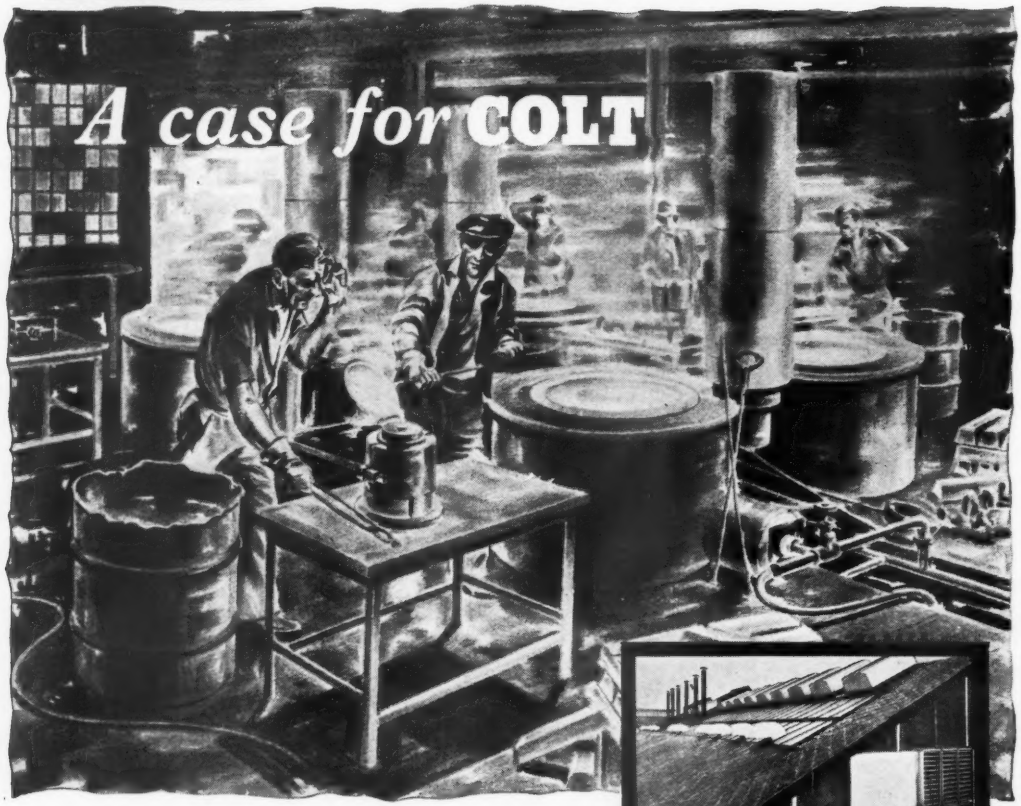
66 PORTLAND PLACE LONDON W1 · TWO SHILLINGS AND SIXPENCE



Bourges Cathedral, reproduced from a water-colour in the R.I.B.A. Library by Francis Cranmer Penrose (1817–1903)

Problem No. 5 Intense process heat



Heat from the furnaces and process featured above presents one of the most common ventilation problems which Colt are called upon to solve. Singly, in small units, or in quantity, each installation constitutes a different problem with a different answer. Unfortunately there can be no rule as to the number of ventilators required per furnace, as the size of the building, total heat load and existing ventilation must all be taken into account before a satisfactory answer to the problem of excessive heat can be found. In our work for over 9000 major industrial and commercial concerns we have planned and installed many systems to cater for just this problem.

Whatever your problem, be it heat, fumes, smoke or condensation, Colt can cure it.

At the Light Production Co., Slough, excessive temperatures (90°F. at head height, 125°F. at roof apex) were caused by heat from furnaces and metal and core ovens. Colt were consulted and they advised a combined installation of SR 3080 extractor ventilators, CO ventilators and Colt Inflow units—the majority of this installation being installed and working within 14 days. This new system gives 100 air changes per hour instead of 20 and working conditions are now completely satisfactory.

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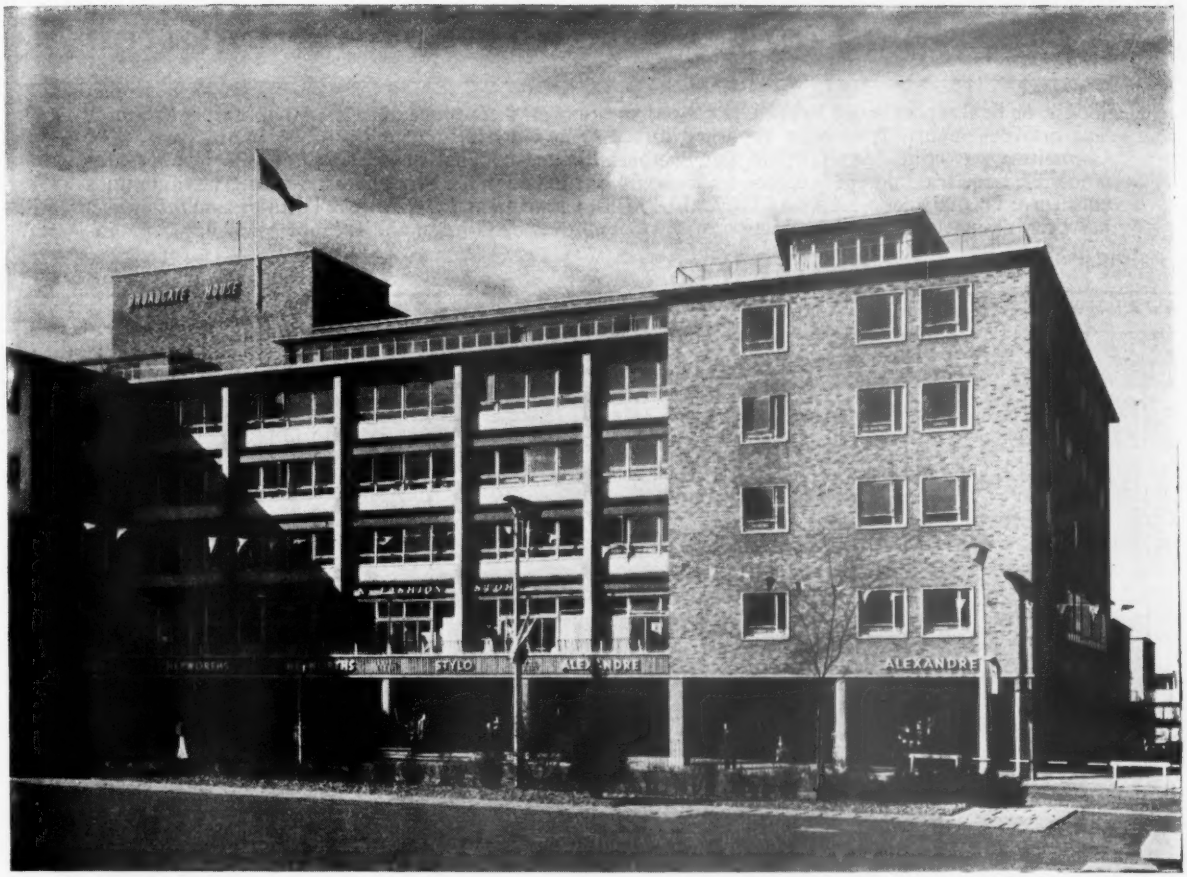

Broadgate House, Coventry — *Architect : D. E. E. Gibson, C.B.E., M.A., A.R.I.B.A.*

One of the many new buildings gracing the skyline of modern Coventry,
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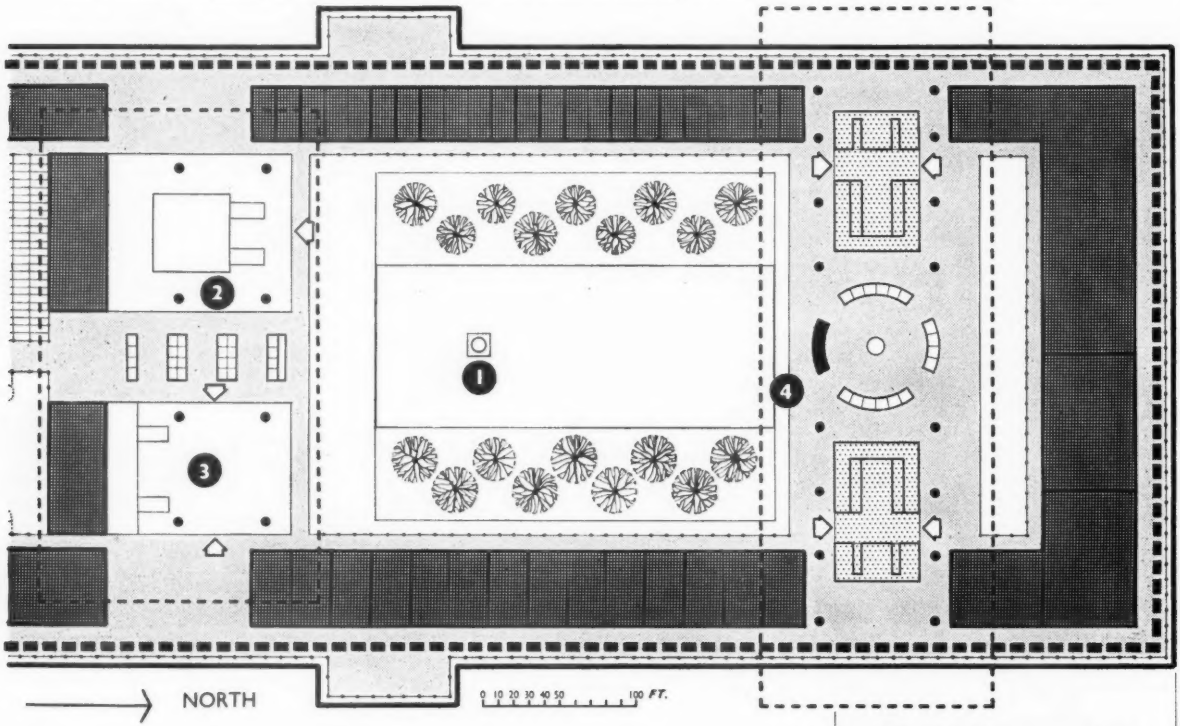
The Glass Age Development Committee

This is the final report issued by the Glass Age Development Committee on "The High Market Project". The previous reports have been published in the form of advertisements throughout this year. The Committee was convened by Pilkington Brothers Limited and has made these detailed proposals for a possible large scale shopping centre, which could be situated in the Black Country area. The Committee consists of G. A. Jellicoe, F.R.I.B.A., Edward D. Mills, F.R.I.B.A., and Ove Arup & Partners, and the project has been designed, under the direction of the Committee, by Gordon and Eleanor Michell, A/A.R.I.B.A.



THE HIGH MARKET 7

THE MAIN SQUARE

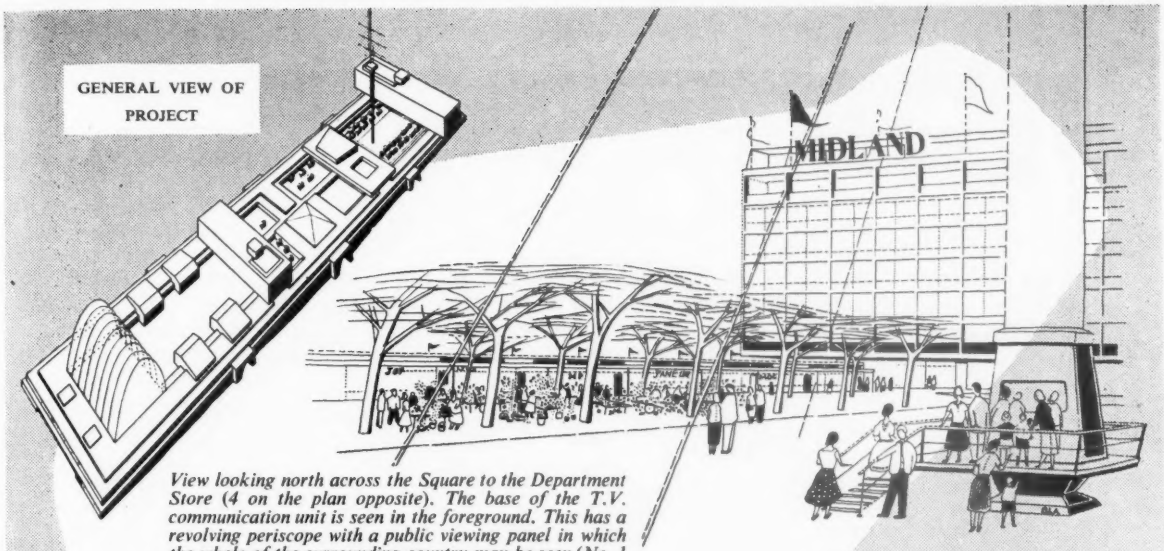
On the north side, the Main Square is bounded by a six-floor Department Store: on the south by a building that accommodates a cinema and a restaurant. Open arcades, with single-storey shops continue on either side, and these arcades may be enclosed during the winter with removable glazed screens: the whole shopping area would then be air-conditioned. The larger shops at the north end of the building could accommodate administrative offices, a Post Office and Banks.

1. *Television communication unit*
2. *Stairs to cinema with illuminated aquarium under large half landing*
3. *Exhibition hall with stairs to restaurant, ballroom and administration offices*
4. *Department Store above*

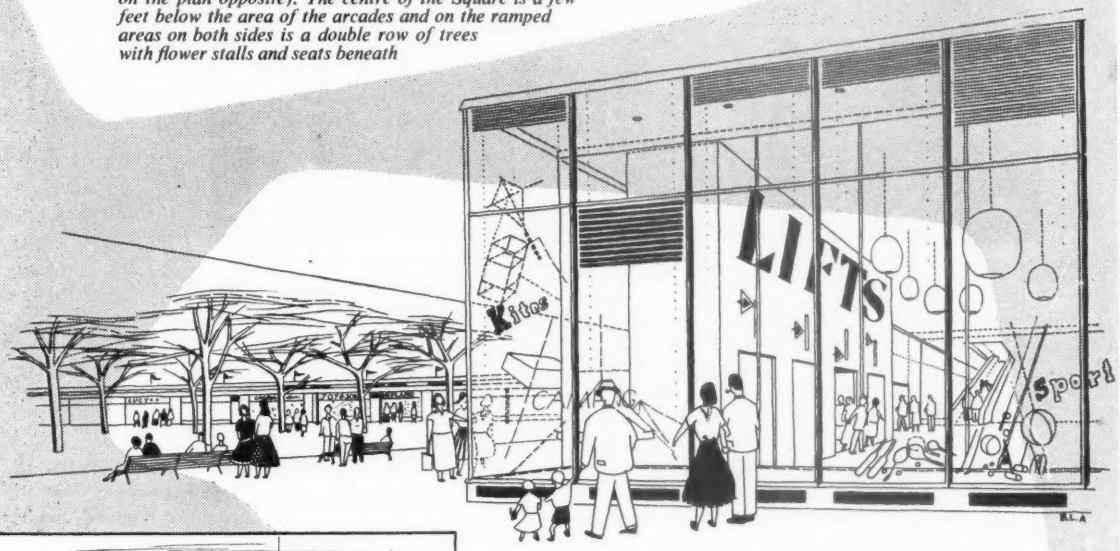
KEY TO TINTS ON PLAN

- *Covered shopping area*
- *Single-storey Shops*
- *Shoppers' lifts from car parks*
- *Moving articulated platforms*
- *Goods lifts*
- *Entrance to Department Store with lifts, escalators and display space. Dotted lines represent Department Store above*

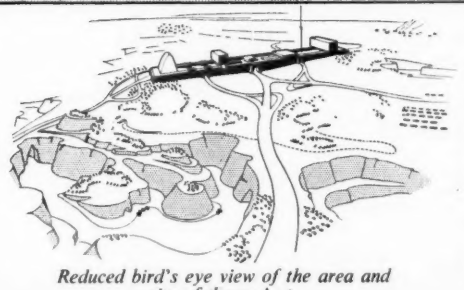
PILKINGTON BROTHERS



View looking north across the Square to the Department Store (4 on the plan opposite). The base of the T.V. communication unit is seen in the foreground. This has a revolving periscope with a public viewing panel in which the whole of the surrounding country may be seen (No. 1 on the plan opposite). The centre of the Square is a few feet below the area of the arcades and on the ramped areas on both sides is a double row of trees with flower stalls and seats beneath



The glazed entrance area of the Department Store. Through the display windows the lifts and escalators may be seen (No. 4 on the plan opposite)



Reduced bird's eye view of the area and site of the project

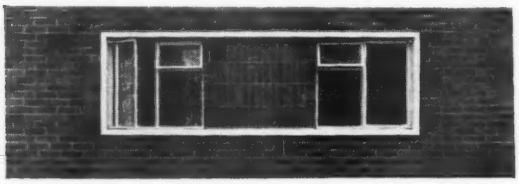
LIMITED, ST. HELENS, LANCS.

Meeching Court Flats, Newhaven. Architects: Lionel H. Fewster & Partners. Partner-in-charge: E. W. Gamble, F.R.I.C.S. Engineer & Surveyor: A. E. Motyer, A.M.I.C.E., M.I.Mun.E. Contractors: Brighton Contractors Limited.

STANDARD WINDOWS FOR ECONOMY
in Newhaven Council Flats

It is appropriate that one of the first buildings you see as you disembark from the Dieppe/Newhaven steamer should be a first-class example of the native genius for compromise.

Designing Meeching Court Flats for the Newhaven Urban District Council posed the architects a pretty problem of how to reconcile two irreconcilables. On the one hand was the usual current requirement of Public Authority building—stringent economy. On the other hand the site has a commanding hillside position overlooking Newhaven Harbour, which must be to many overseas visitors their first close-up sight of England—so Meeching Court is a 'shop window', not only for Newhaven, but for the whole country. In the middle of a picturesque huddle of existing building with a fascinating interplay of textures—age-mellowed brick, knapped flint, and timber—an essay in the modern manner would obviously be out of place.



Detail of window grouping — North elevation.

The architects' answer lay in careful conformation of the building to the contours of the site and ingenious detailing —especially as regards the placing and grouping of the windows. All the windows are standard types manufactured by Williams & Williams, but any possible feeling of monotony has been avoided by skilful combining of 1′ 8″ and 2′ ('Z') module windows, the effective but restrained use of concrete subframes and mildly decorative br ck-work. Visual emphasis is given to the staircases by the use of Williams & Williams 'Wallspan' partly fixed glazed, partly filled by 1′ 8″ module opening lights. The 'Wallspan' is fixed to the sides of the reinforced concrete stair slabs.

H. P. BUCKINGHAM

Passing the Buck

Last month Crawley New Town said goodbye to Mr. H. P. Buckingham who has been Area Manager for the district since Williams & Williams office was opened there in 1954. His place has been taken by Mr. H. G. Randel.

'Buck' goes to Bristol as Divisional Sales Manager to replace Mr. E. P. Butler who is going overseas.

Another candidate for foreign travel is Mr. W. Littlewood of Leeds who is bound for the U.S.A. Mr. W. Brindley becomes Area Manager in his stead.

H. G. RANDEL

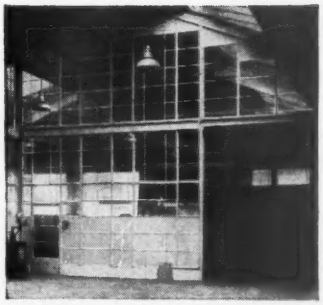
W. BRINDLEY

The 'Wallspan' cladding on one of the staircases.

COMBATING CORROSION

A seaside situation such as this imposes severe strain on the corrosion resistance of all metallic components used. Ideally we would recommend that the windows in such a building should be aluminium. Unfortunately the budget in this case would not run to the additional expense involved, so yet again a compromise was reached. Hot dip galvanized steel windows were supplied and these have been treated after installation with aluminium paint. This serves two purposes.

It makes for a similar overall appearance between the windows and the 'Wallspan' and also gives a very real additional protection against the salt-laden atmosphere. The difficulty with this procedure as against using aluminium windows is that the efficiency of the paint film may be affected by surface damage while the oxide layer on a solid aluminium section would automatically renew itself. Also, of course, the paint will need to be renewed periodically.



Vehicle Repair Shop. Southern Electricity Board, Reading. Architect: Southern Electricity Board. Windows and Patent Glazing by Williams & Williams.

INGENIOUS USE OF STANDARD SASH

Standard Industrial Sash—despite its very real economic advantages—tends to be regarded as something of a Cinderella among standard windows. It is all the more interesting then to see how effectively it has been used in this contract, not only for the continuous fenestration but also fixed direct to the structural steelwork to form glazed internal partitioning.

The photograph (1) shows how this has been carried out, using standard 'T' form coupling members to join the component sashes together. The glazed door was also manufactured by Williams & Williams.

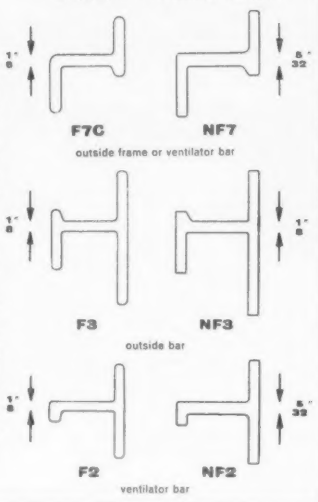
Note the excellent lighting provided by a continuous run of Standard Sash in the sidewalls combined with Aluminex Patent Glazing in the roof.

steel aluminium

'Super Standards'

All Williams & Williams standard domestic windows to BS.990 — both 1'8" and 'Z' range — are now available in aluminium as well as in rustproofed steel. Owing to the high cost of aluminium these windows are unfortunately still too expensive for normal day-to-day uses but they can effect a considerable long term saving in maintenance if the initial outlay can be borne.

Aluminium 'standards' are particularly recommended for exposed seaside situations where the high salt content of the atmosphere causes quicker-than-usual breakdown of paint with subsequent deterioration of steel windows. Owing to the different physical properties of aluminium — and the fact that the sections are extruded instead of being rolled — the sections used for these windows are modified slightly from the familiar BS.990 form. Half-size details are reproduced here for comparison.



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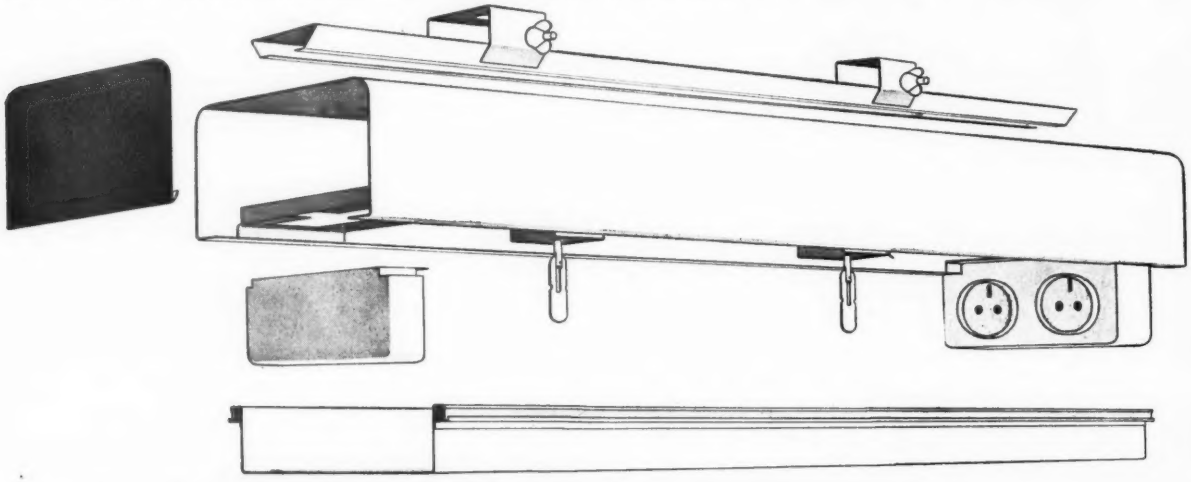
Each fitting is supplied pre-assembled and pre-packed. Each has a prescribed application; yet the chassis conforms to a standard design throughout the entire range, a factor of interest to Architect, Engineer and Contractor alike. The Atlantic chassis also incorporates other features designed still further to reduce installation and maintenance costs. Here then is a brief summary of Atlas Atlantic. Please write for further details.



FEATURES OF THE STANDARD ATLAS ATLANTIC CHASSIS

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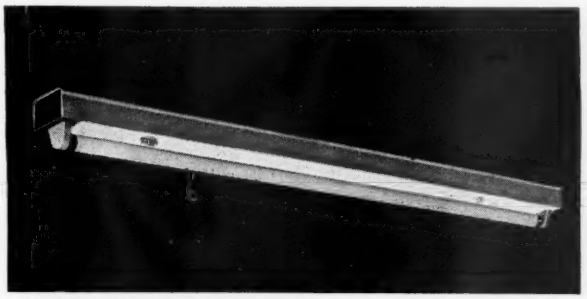
3 Channel attachment for quick fixing of plastic diffusers
4 Easily detached end-plates for continuous mounting
5 Knock-outs for double-banking of chassis when four or more tubes are required
6 Universal mounting attachment
7 Totally enclosed gear—pre-assembled
8 Basic spine standard to all 366 fittings

366 PRE-ASSEMBLED FITTINGS

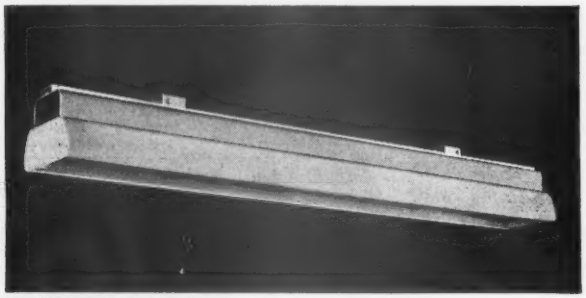
With limited exceptions—the fittings shown here can be supplied in 8ft., 5ft., 4ft., or 2ft. lengths, with one, two or four tubes, switch-start or quick-start circuit, and for fixed centres or universal suspension. Industrial Series 10 and 20 also includes slotted or unslotted reflector fittings with closed or open ends.

SERIES 15 "Perspex" Louvred fittings—Commercial

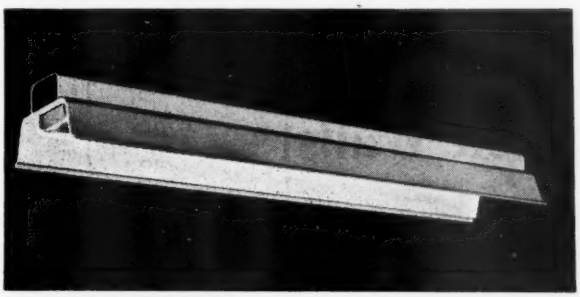
SERIES 18-28 Batten fittings for G.P. lighting applications



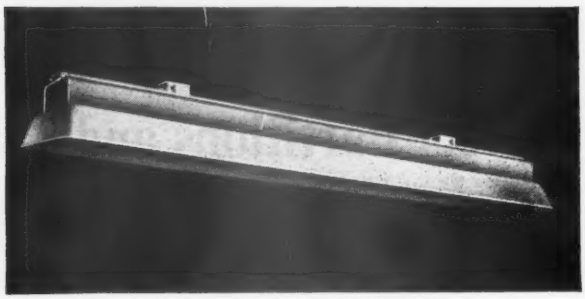
SERIES 16 "Perspex" Reflector fittings



SERIES 10-20 Industrial Metal reflector fittings with open or closed end and tops



SERIES 17 "Perspex" Trough fittings—Industrial



SERIES 14 Enclosed "Perspex" fittings—Commercial

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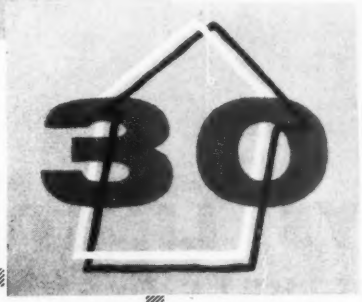

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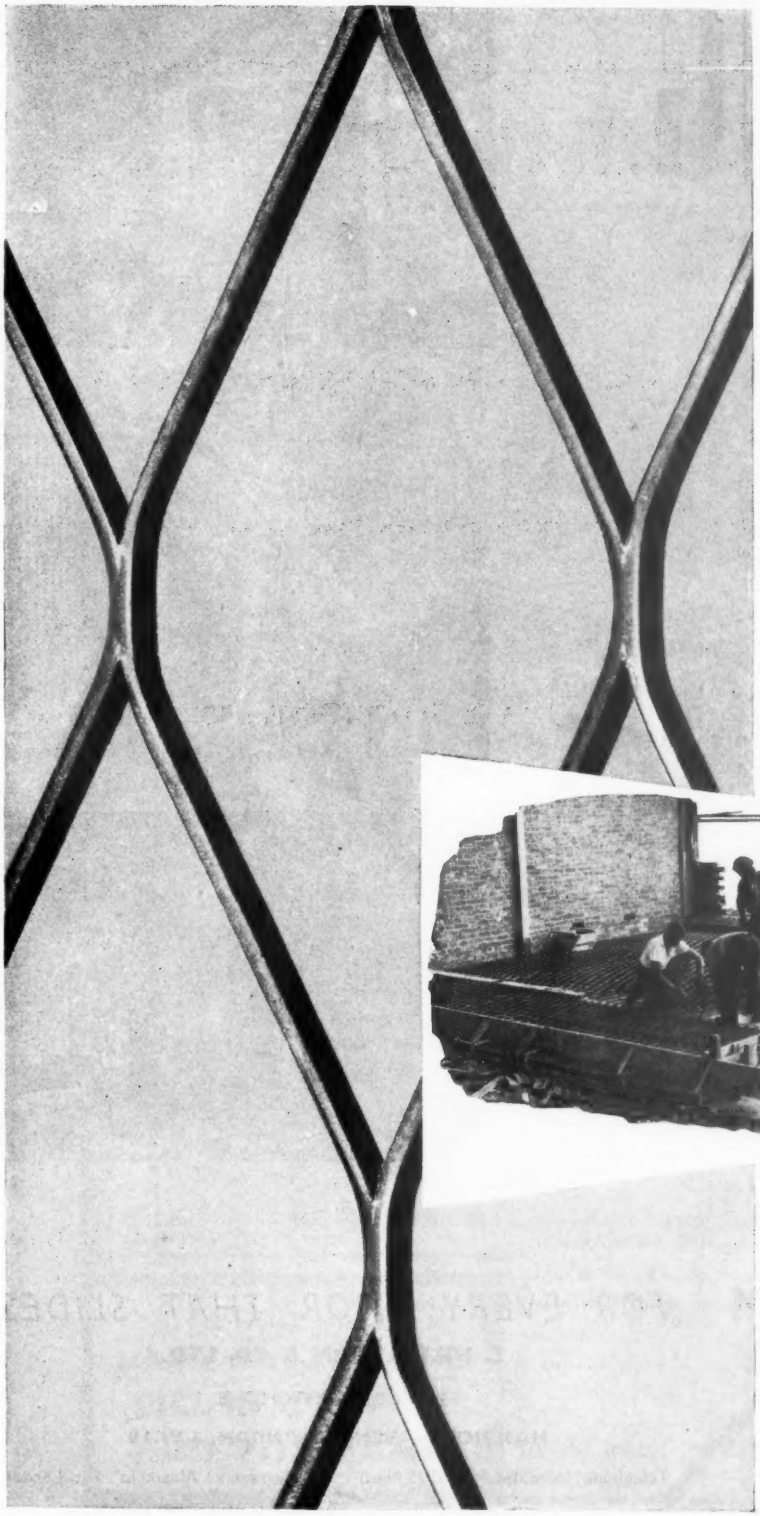

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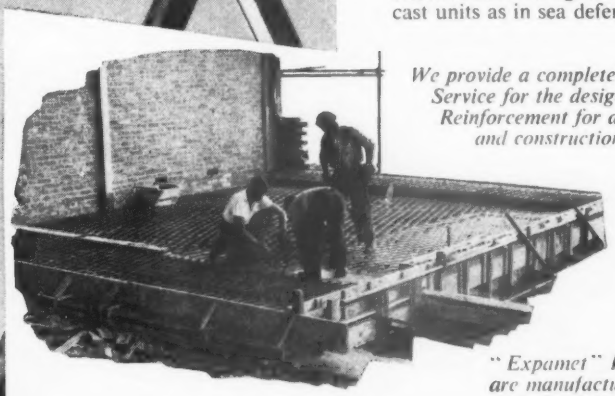

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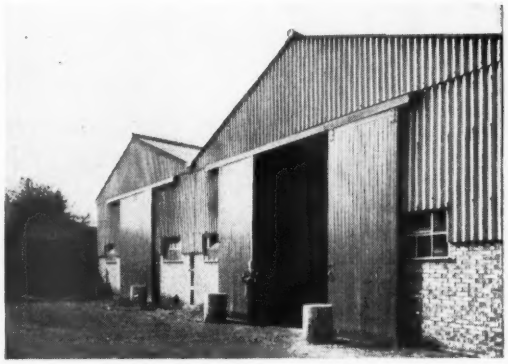

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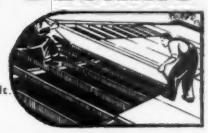

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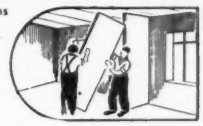

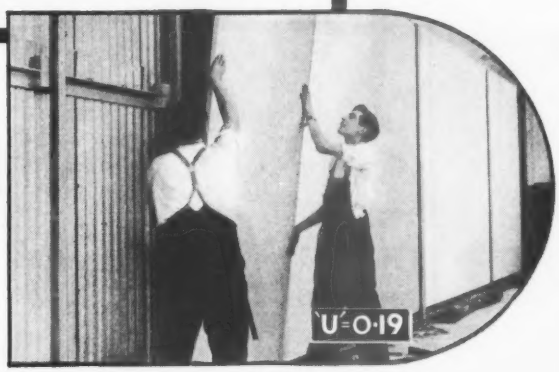

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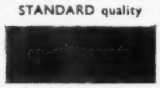
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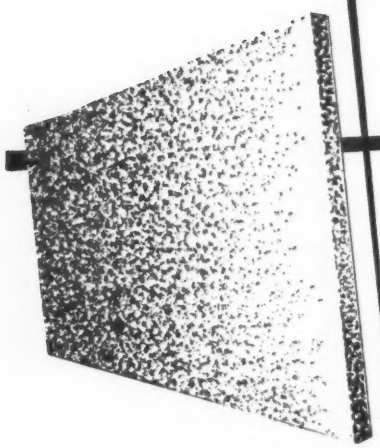

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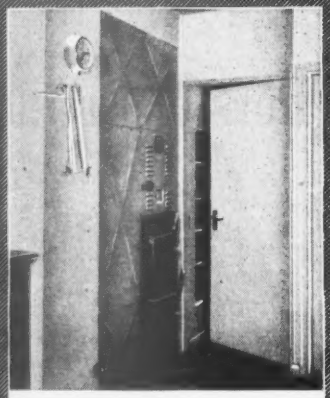
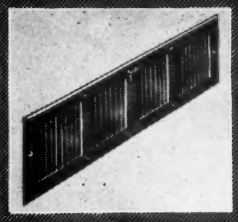
House in Pinner, Mdx. Designed by N. J. Dore, A.R.I.B.A., A.A.Dipl. (Hons.) and T. P. Wurr, A.R.I.B.A., A.A.Dipl.

ARCHITECTS CHOOSE RADIATION'S WARM-AIR SYSTEM FOR THEIR HOME

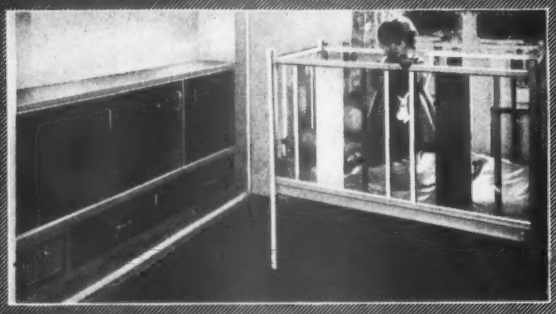


The compact solid fuel unit fits neatly into the kitchen.



Clean, warm air is circulated through these small wall grilles, warming the whole room evenly throughout. No draughts or stuffiness, no dirty stains on the walls.

A perfectly healthy, refreshing warmth is circulated, ideally suited to children, variable to suit the day and hour.



For their new house at Pinner, Middlesex, a husband and wife architect team have specified Radiation's completely automatic Warm-air System. It keeps their open-plan house really warm and comfortable all the year round—with ample hot water whenever it's wanted. Clean warm air is ducted into every room through small, unobtrusive wall grilles. The finger-tip thermostat control adjusts the temperature *exactly* as the occupant wants it.

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This installation was designed for a temperature rise of 35°F. throughout the house; and it provides for 50 gal. or more of hot water at 140°F. at the tap in 24 hours—more than enough for baths and general domestic purposes, and to satisfy the very considerable demands of a washing machine.

The house is insulated to the Egerton standard, with extensive single glazing over outside walls. The floor area is 1465 square feet. Consumption of fuel—Phurnacite or coke—was 4 tons 4 cwt. in the first year, 4 tons 8 cwt. in the second year.

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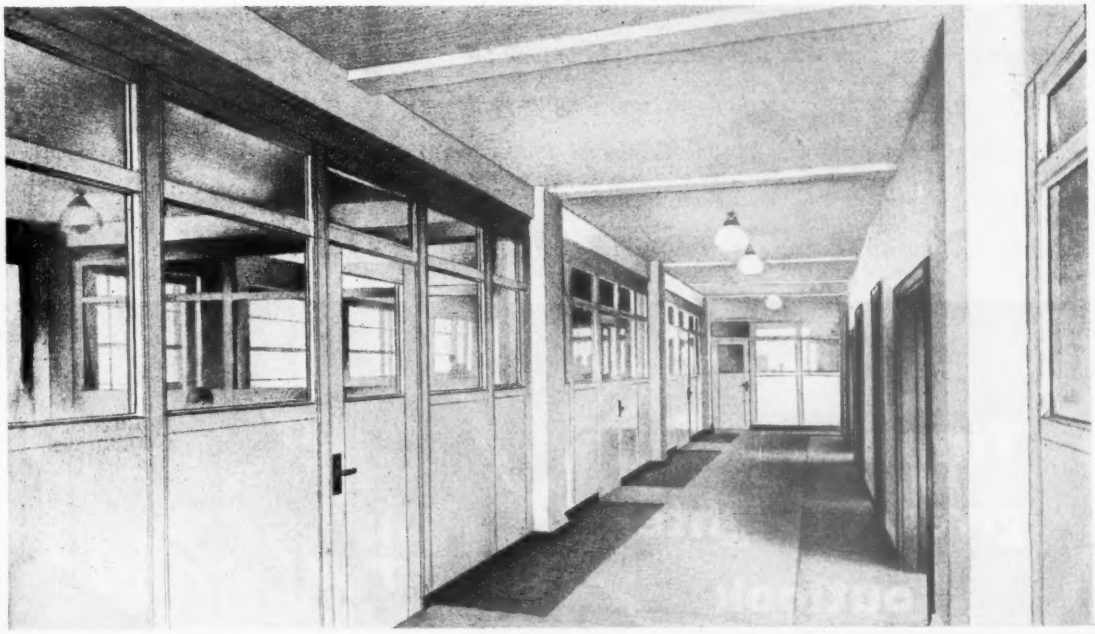

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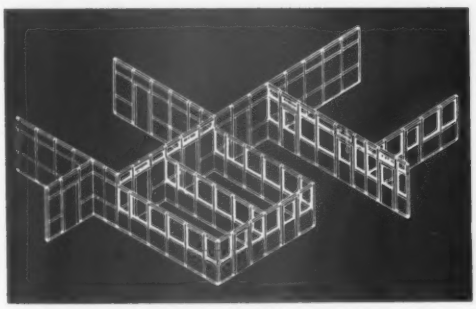

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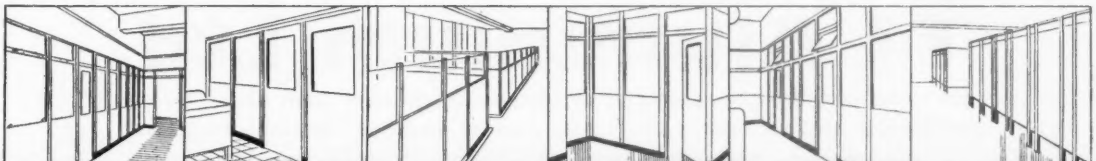

To preserve the pleasing appearance of this extensive window frontage might well have involved heavy maintenance expenses. Windows in Timinium alloys need virtually no maintenance: they look after themselves. They require no protective painting, cannot warp or rust, and weather well. *The Development Department of TI Aluminium Ltd. offers an advisory service covering all aspects of aluminium usage. Architects and builders are invited to make use of it freely.*

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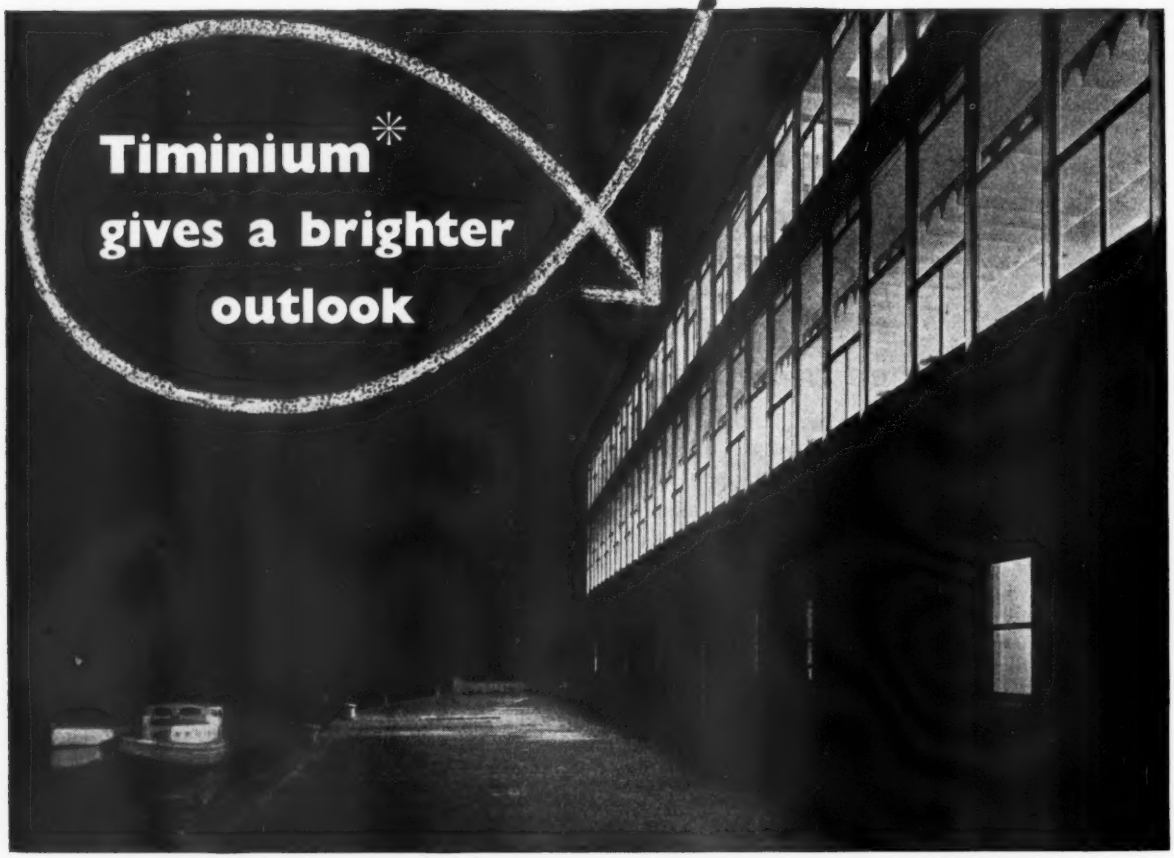

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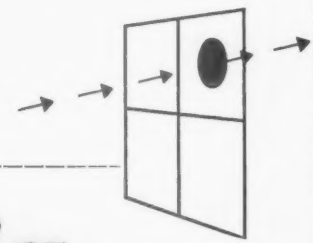

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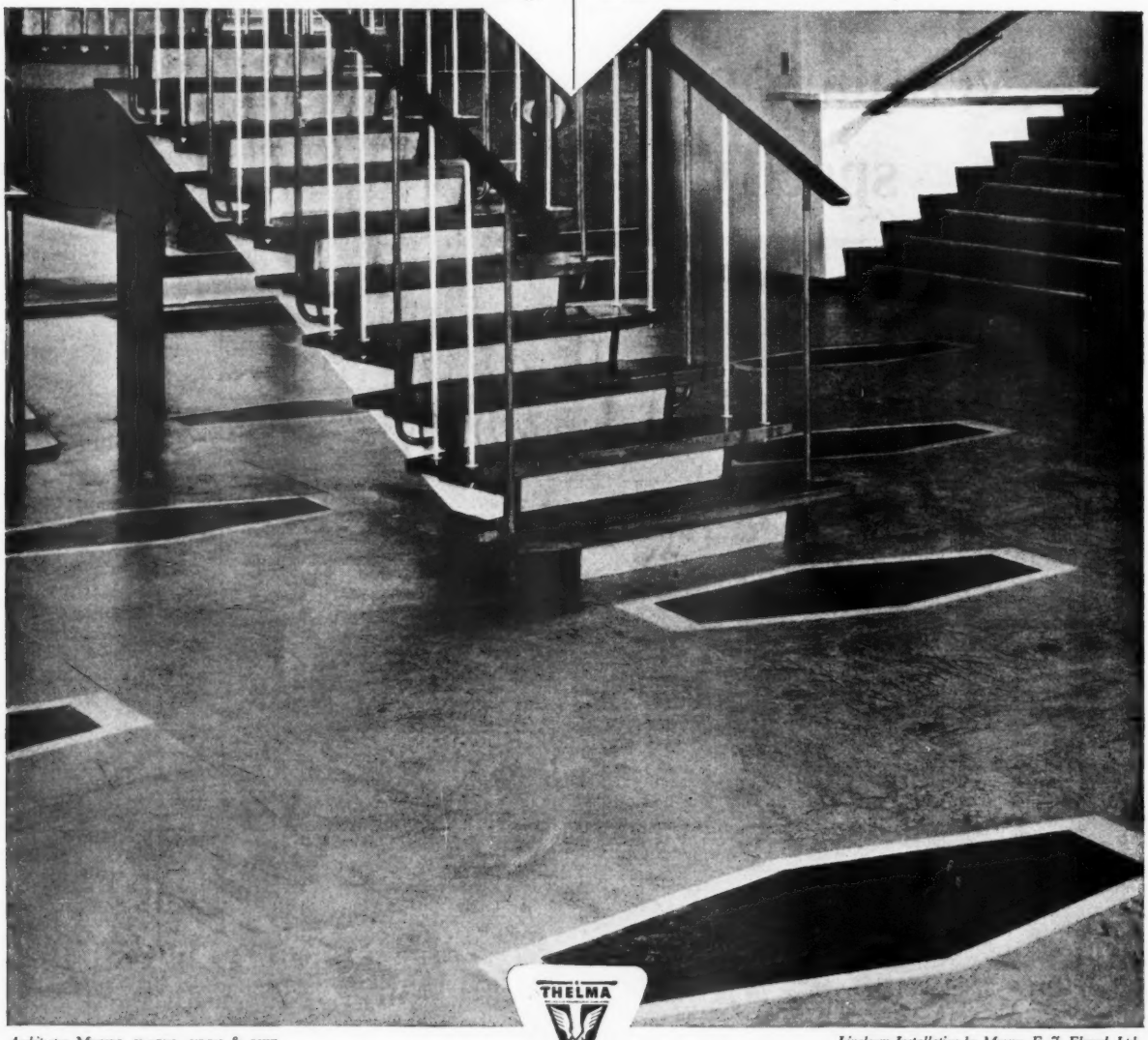

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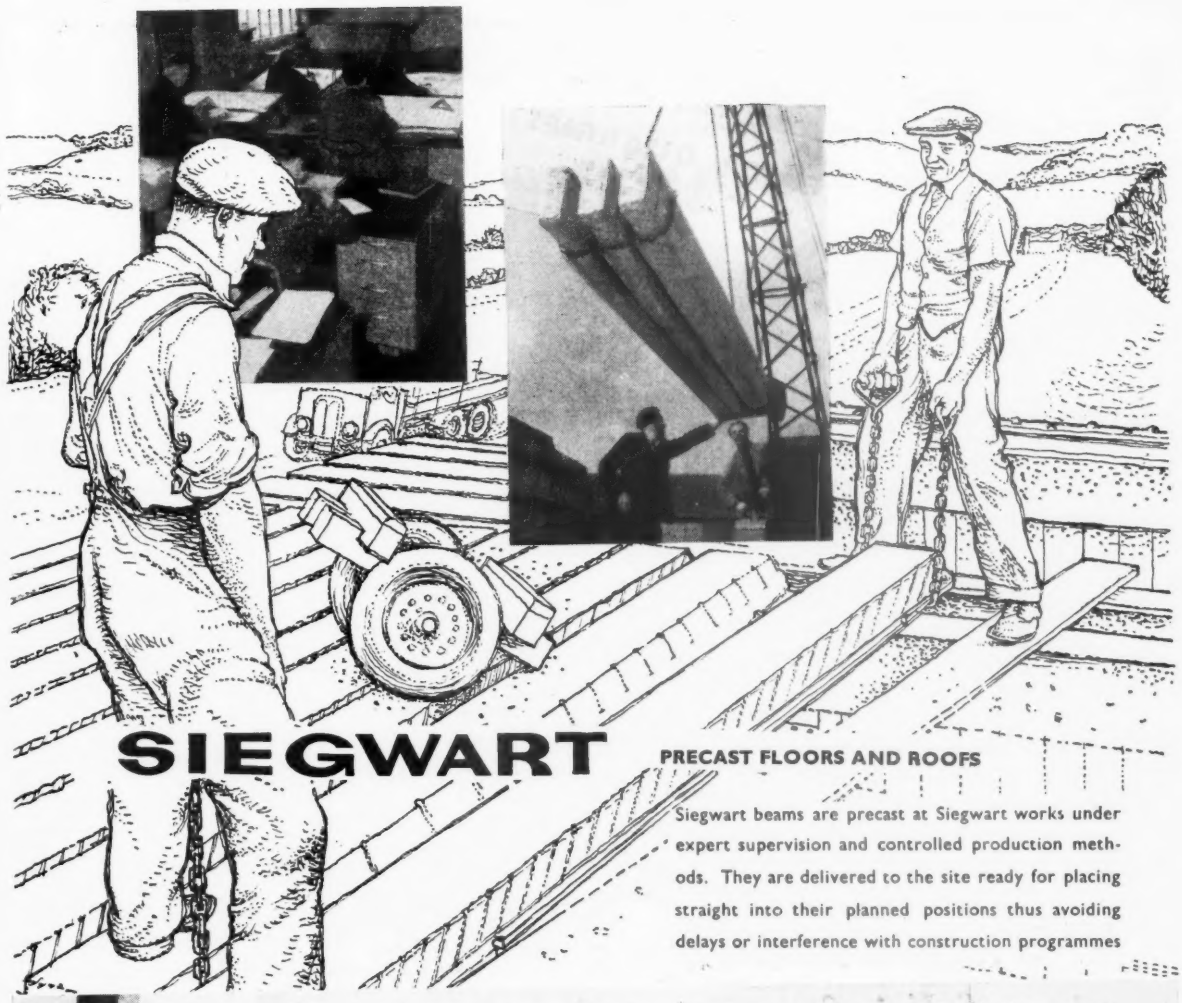

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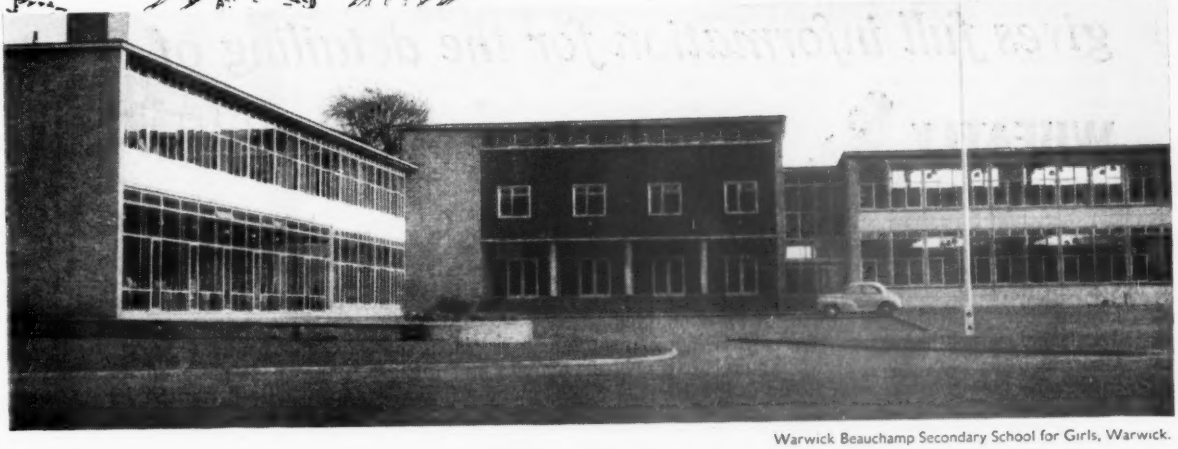

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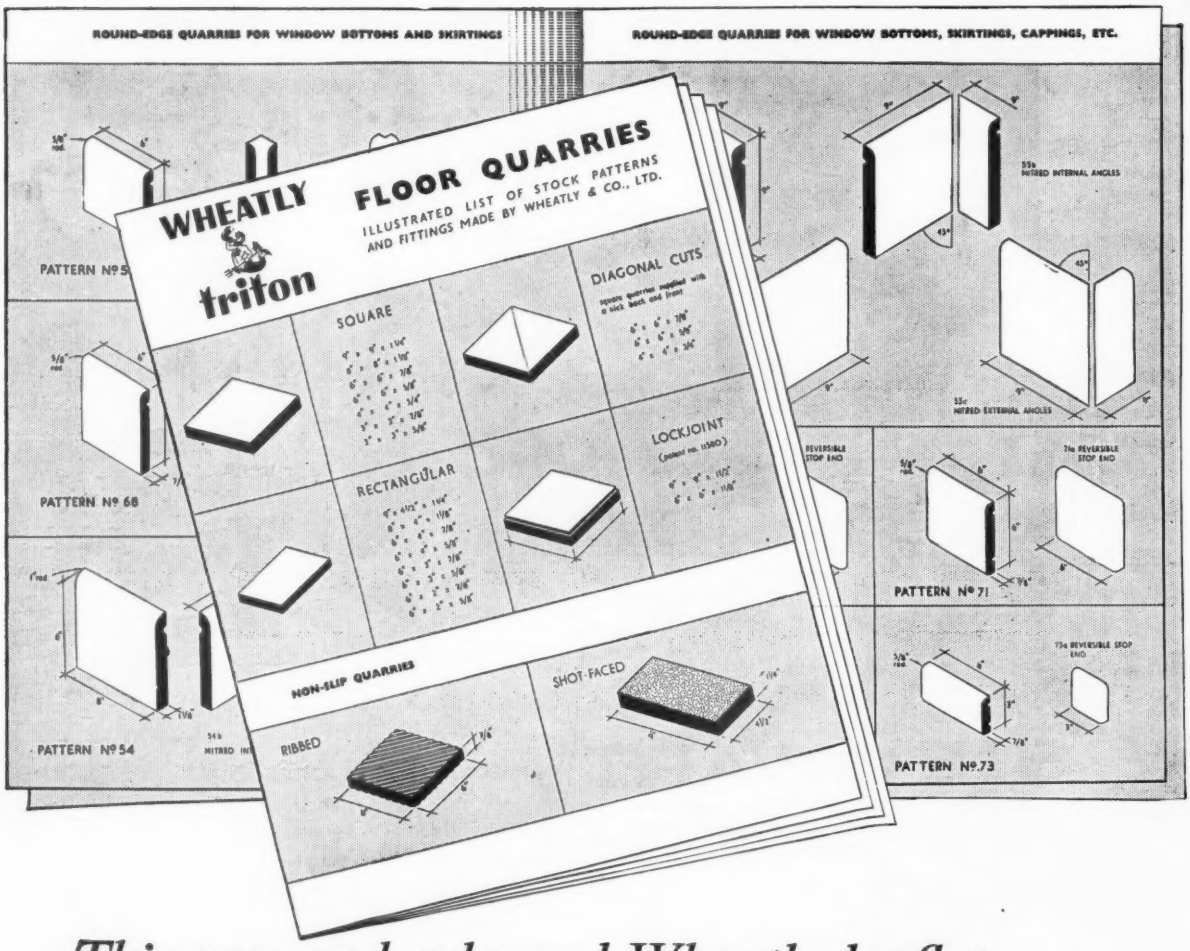

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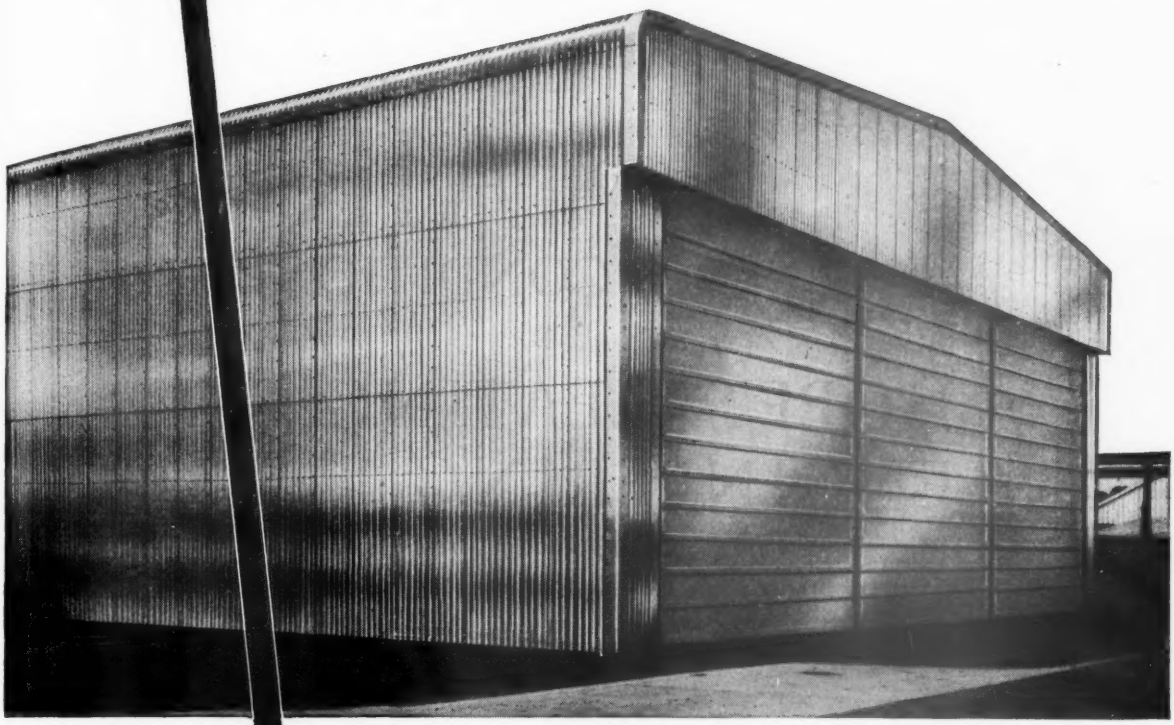

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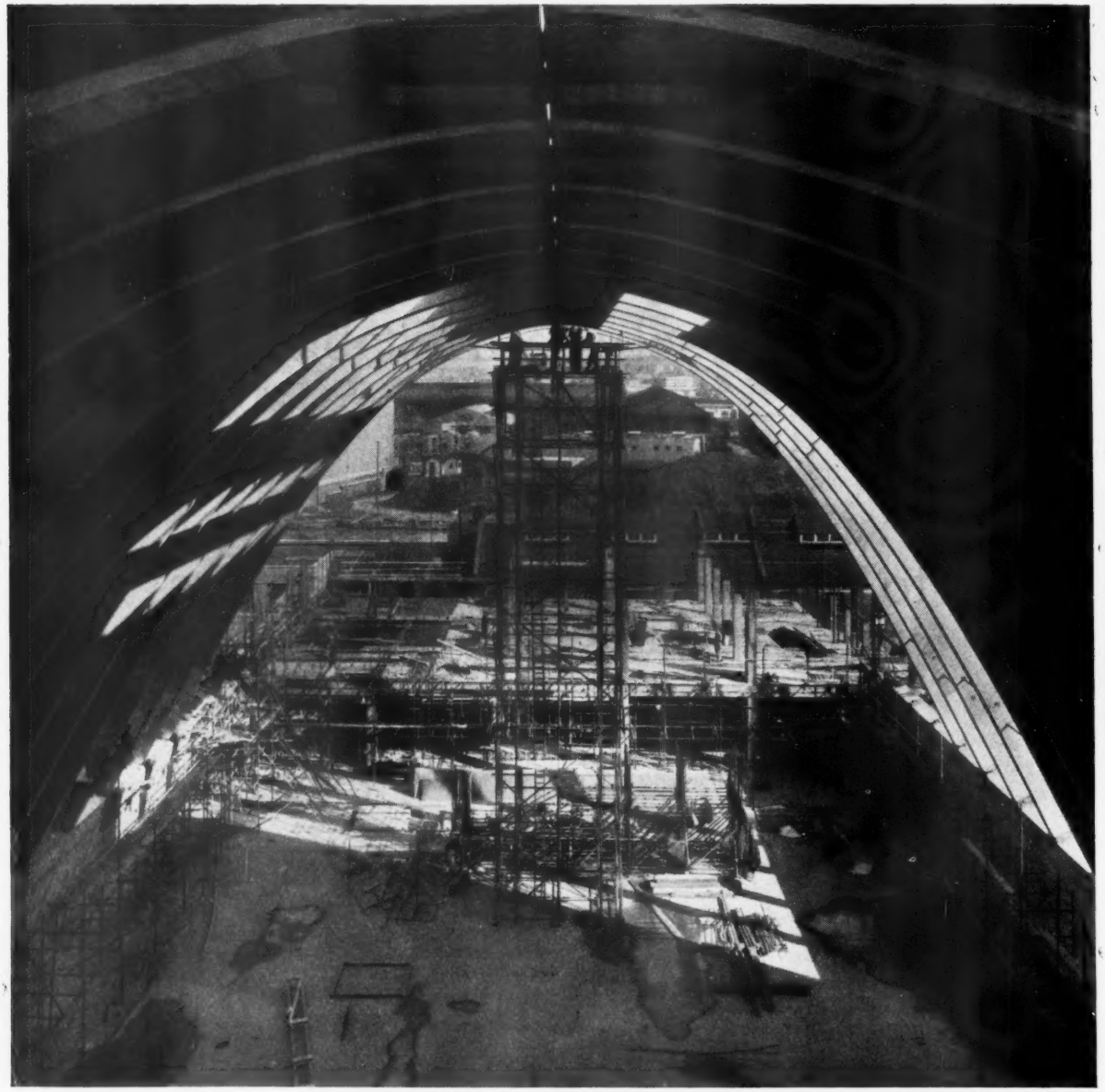

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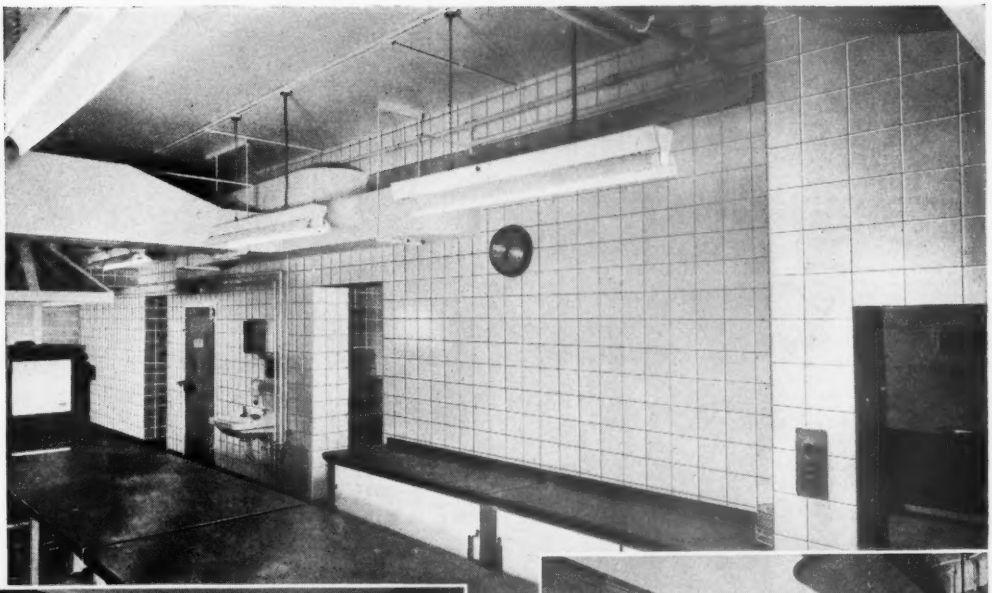
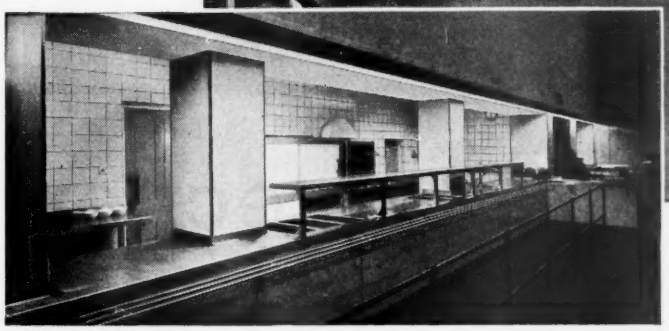
View of the kitchen.





Servery in the refectory.

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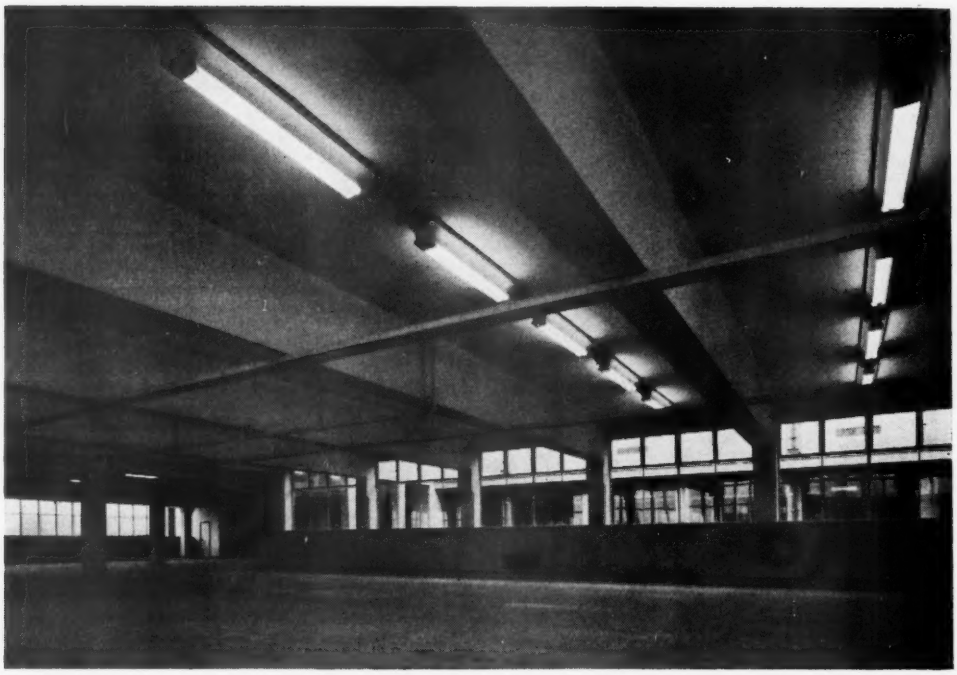

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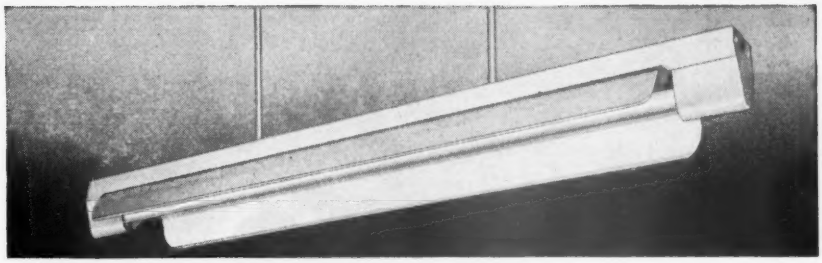

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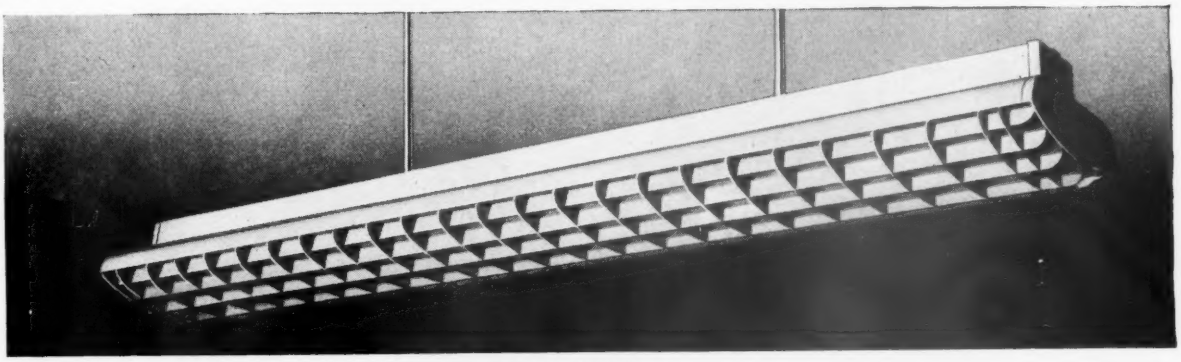

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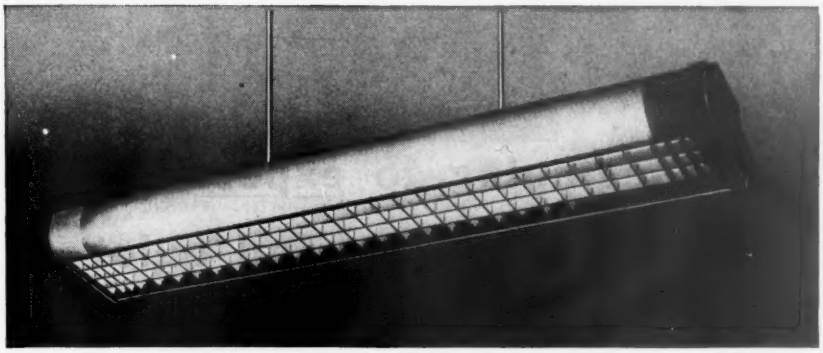

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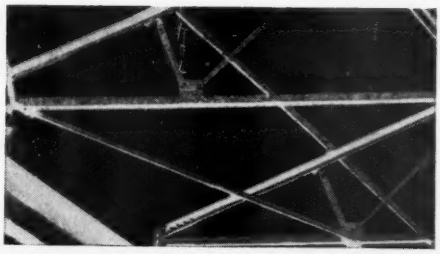
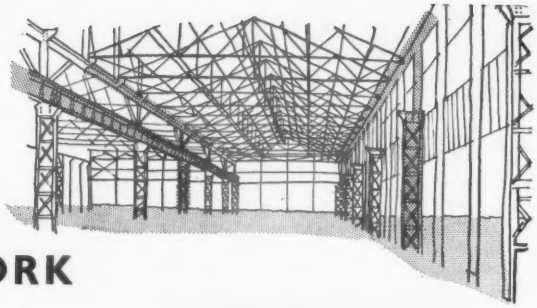
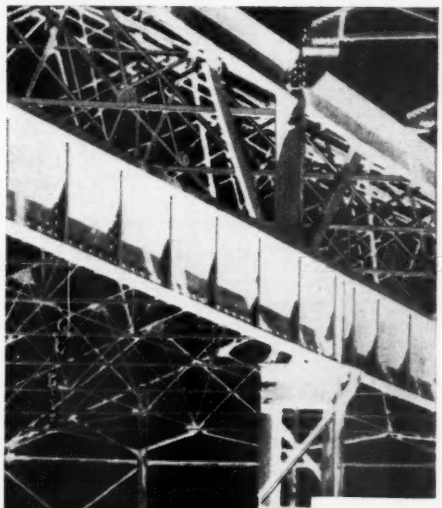
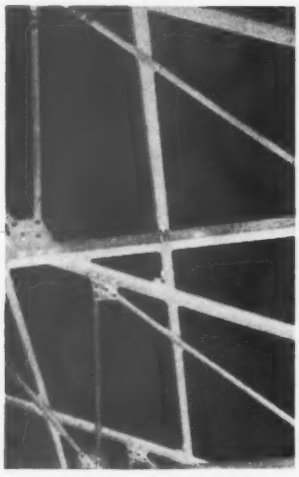




STRUCTURAL STEELWORK





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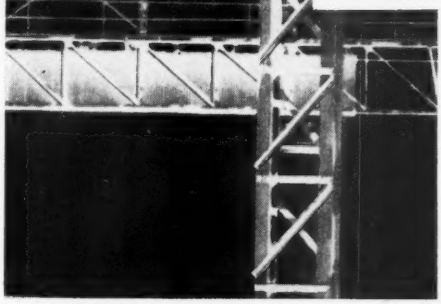

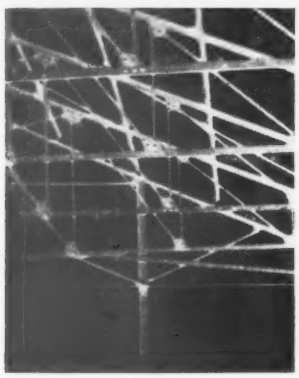

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AP266-249

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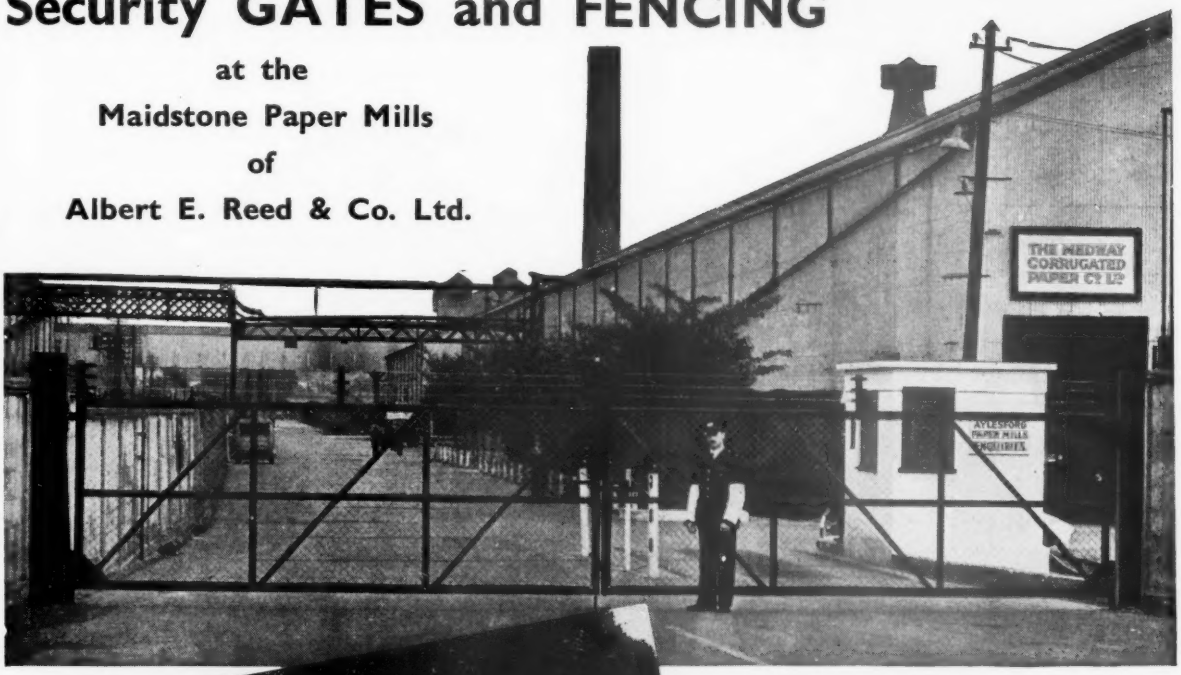

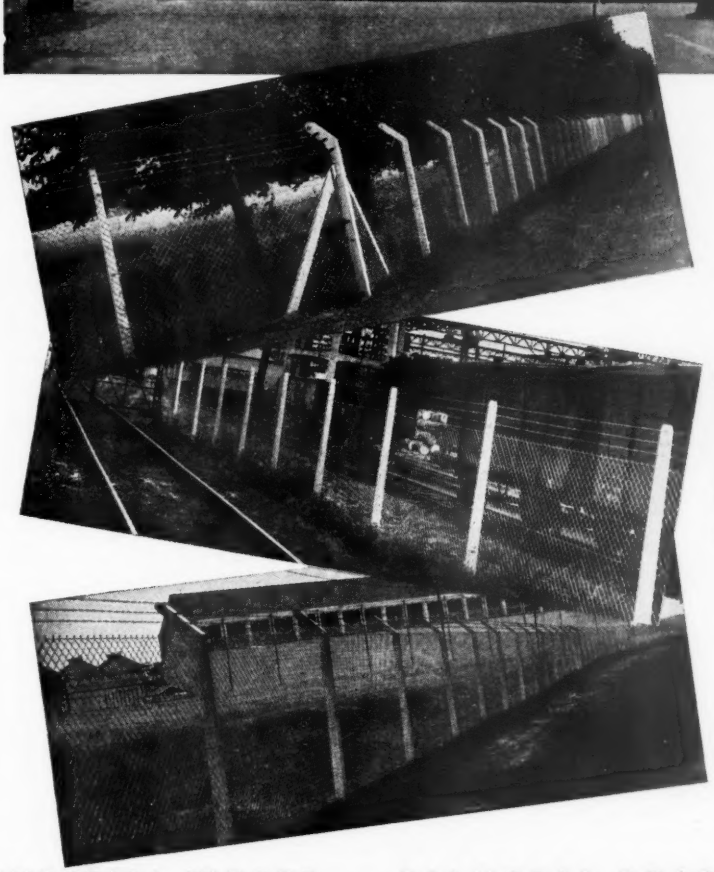

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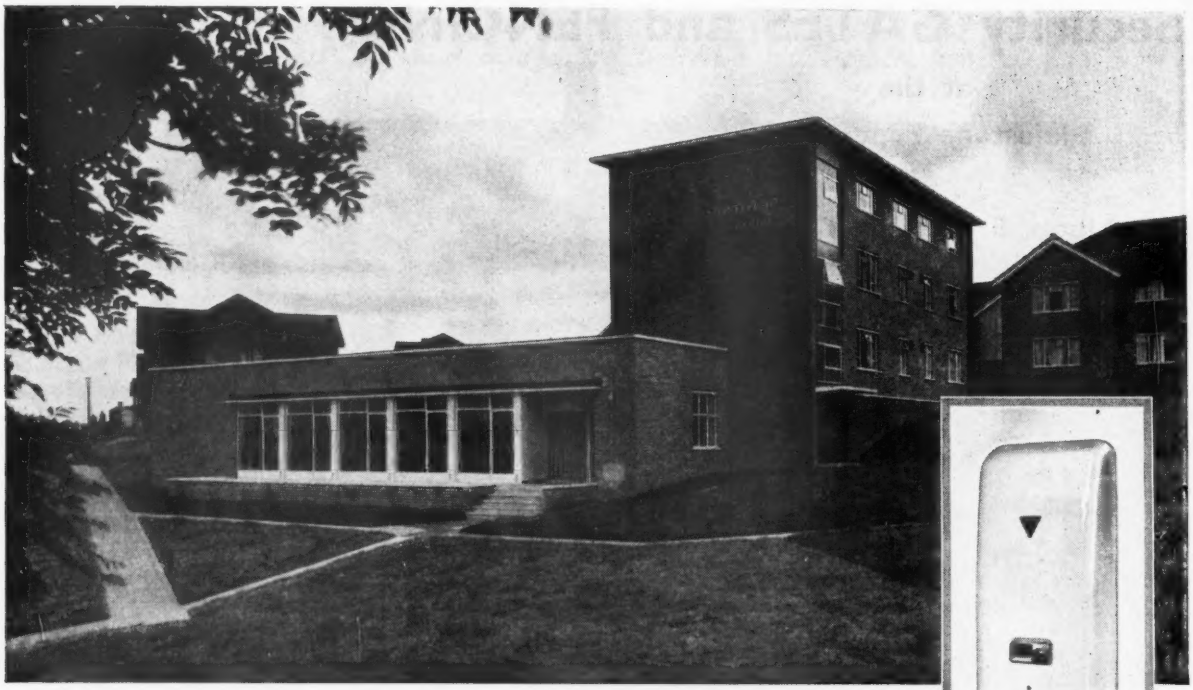
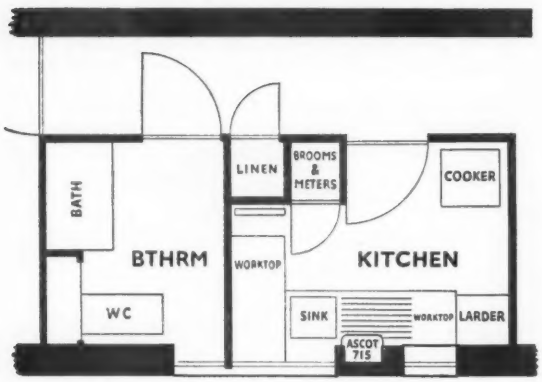


ASCOT IN NEW HOUSING (1)

84 old people's flats newly built at Stoneleigh Court, Woodford Avenue, Essex for the Ilford Borough Council, are equipped with Ascot 715 Balanced Flue Multipoint instantaneous gas water heaters. Installed in the outer wall of the kitchens, the Ascot 715's supply instant, endless hot water to sink, bath and wash basin in each flat. Stoneleigh Court consists of five 2-storey blocks of flats, each block containing 10 bed-sitting room types and six one-bedroom with sitting room types, for one and two persons respectively and one 3-storey community block having 4 bed-sitting room flats and a Caretaker's flat. Each flat contains kitchen (see plan, below) fitted with cupboards, and a bathroom containing a special "sitting position" bath and W.C. Weekly inclusive rental of the one-bedroom flats is 26/11d; and that of the bed-sitting room flats is 25/5d.



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EDITORIAL

R.I.B.A. Dinner 1957

The R.I.B.A. Dinner 1957 is to be held at the Dorchester Hotel, London, on Wednesday 27 February.

A form of application is enclosed with this issue of the JOURNAL.

Anti-Frost Precautions

There should be no repetition of the damage caused by the severe spell of weather of last February if the advice now being widely distributed is followed. The campaign is being led by the Minister of Housing and Local Government, and his letter on the subject to the President, R.I.B.A., is given below:

2 November 1956

K. M. B. Cross, Esq., P.R.I.B.A.

Dear Mr. Cross,

I am writing to ask whether you would be good enough to draw the attention of the members of your Institute, and generally to give all possible publicity to the recommendations in a circular which I sent recently to water undertakers and housing authorities about action to avoid frost damage on the scale we experienced last winter.

I enclose a copy of the circular and also a copy of an answer which I gave to a question in the House of Commons on Tuesday on the subject, from which you will see what I am proposing to do to arouse public interest generally.

I would like to take this opportunity to stress the need for careful design of plumbing systems in the earliest stages of planning houses and other buildings. The new British Standard Code of Practice says in concise form what is expected, and if these recommendations are met in the design of houses the requirements of the proposed new bye-laws will be fulfilled.

I feel sure I can count on your co-operation in this matter.

Yours sincerely,

DUNCAN SANDYS

(More about the Circular and Code of Practice is given in a note in Review of Construction and Materials, p. 68.)

The Minister referred in replying to a question in the House on 30 October to a short television film that had been prepared which showed the kind of simple precautions that could be taken by people in their own homes, and to a demonstration 'frost-proof' house that will be on view at the Ideal Home Exhibition next March.

Mr. C. H. Aslin, Past President. From the painting by Mr. Allan Gwynne-Jones, A.R.A.

The Architecture Club

A supper of the Architecture Club was held at Simpson's in the Strand on Tuesday 20 November under the chairmanship of the President, Viscount Esher, and was followed by a debate on the proposition 'That St. Paul's should be given a picturesque and not a classical setting'.

The debate was opened by Sir William Holford, P.P.T.P.I., [*F*], and Sir Giles Gilbert Scott, O.M., R.A. [*F*], and continued by Mr. G. A. Jellicoe, Mr. Peter Smithson, Mr. A. S. G. Butler, Dr. Thomas Sharp, Mr. H. S. Goodhart-Rendel, Sir Patrick Abercrombie, Lieut.-Colonel Cart de Lafontaine, Mr. Joseph Emberton and Mr. Cyril Carter. Unhappily Mr. Emberton was taken fatally ill after making his speech.

Royal Fine Art Commission

It was announced last month that The Queen has approved the appointment of Professor Basil Spence, O.B.E., A.R.A., A.R.S.A. [*F*], to the Royal Fine Art Commission in succession to Sir Albert Richardson, K.C.V.O., P.R.A. [*F*], whose term of office had expired.

Gaps in Building Know-How

This was the title of a residential week-end symposium held recently at Alston Hall, Preston, by the Preston, Blackburn and District Society of Architects in co-operation with the Building Centre, the Lancashire, Cheshire and Isle of Man Branch of the R.I.C.S. and the North-Western Federation of Building Trades Employers. The purpose was to discuss common problems—technical, managerial and financial—of the building industry.

Fears that not many people would give up a week-end to talking 'shop' or that sectional differences might be unduly prominent proved groundless. More than 50 persons attended and all the papers and discussions were continuously interesting. At the end it was generally agreed that the symposium promised a new and vigorous team spirit in the region.

The President of the Preston, Blackburn and District Society, Mr. Tom Mellor, B.Arch. [*A*], opening the proceedings, stated the objects of the symposium. The other principal speakers were: Mr. G. Grenfell Baines, A.M.T.P.I. [*A*] on *Selection and Design*, Mr. H. S. Oddie, President of the Institute of Builders, on *Ensuring the Best Job*, Mr. Eric L. Bird, M.B.E., M.C., [*A*] on *The Know-How of Modern Building* and *Materials of Today*, and Mr. F. B. Simcock, A.R.I.C.S., on *Value for Money*. At the end, the conclusions of the symposium were summarised by Mr. Grenfell Baines.

There was a small exhibition consisting of screens illustrating new techniques lent by the Ministry of Works and of interesting new building materials provided by the Building Centre. A full report will be published in the January JOURNAL.

Building Centre Forum

The autumn series of Building Centre evening discussions on materials and components which ended last month has been a distinct success. Another series of four meetings will be held fortnightly starting in the middle of February. One admirable feature of the Forum evenings has been the strict control by the chairman on length of time, which has kept the meetings crisp.

One advantage of off-the-record debates is that speakers express themselves frankly and seldom bother to tone down criticism. This means that the audience is limited to those present, and they must spread around the more valuable points arising.

Lighting in Architecture

At a meeting of the Illuminating Engineering Society to be held on 8 January 1957 a paper entitled 'Lighting as an Effective Aid to Architecture' will be presented by Messrs. H. R. Ruff, H. E. Bellchambers, and R. V. Mills. Members of the R.I.B.A. are invited to attend and take part in the discussion.

The time of the meeting is 6 p.m. and the place the Lighting Service Bureau, 2 Savoy Hill, London, W.C.2.

Joint Contracts Tribunal

The Joint Contracts Tribunal announce that they have received documents concerning the proposed revision of the R.I.B.A. Standard Form of Contract from 134 bodies or individuals, containing a total of over 1,400 points, which when summarised occupied not less than 236 pages. To date some 500 of these points have received preliminary consideration by the Tribunal. The closing date set for the receipt of observations and suggested amendments was 29 February 1956.

The Joint Contracts Tribunal was reconstituted in October 1955 to comprise representatives of the Association of Municipal Corporations, the County Councils' Association, the London County Council, the Urban District Councils' Association and the Rural District Councils' Association, apart from the existing representatives drawn from the R.I.B.A., the R.I.C.S. and the N.F.B.T.E. A representative of the Metropolitan Boroughs Standing Joint Committee was subsequently appointed in April 1956. The initiation of the general revision of the R.I.B.A. Standard Form of Contract was the revised Tribunal's first task.

Journal: Bound copies

The sixty-third volume of the 3rd series of the R.I.B.A. JOURNAL was completed with the October number. It will be possible to provide a limited number of bound volumes as in previous years and these should be available early in April 1957. Loose numbers of the volume must be returned in exchange for the bound volume. Orders should be addressed to the Secretary, R.I.B.A.

The styles are as follows: Bound in paper sides, strong linen back—7*s.* 6*d.*, plus 1*s.* 8*d.* postage. Bound in buckram boards, gilt lettering—12*s.* 6*d.*, plus 1*s.* 8*d.* postage. Buckram binding cases—6*s.*, plus 1*s.* 1*d.* postage.

A few paper bound copies of volume 61 and paper and buckram bound copies of volume 62 are still available at the above prices but all earlier bound volumes have now been sold.

Cover Picture

The illustration on this month's cover, The South Front of Bourges, by Francis Penrose, has been reproduced from one of the many fine drawings in the R.I.B.A. collection.

The drawings collection now numbers about 25,000 items, and is possibly, so far as content is concerned, the most important assembly of architectural drawings in the world.

The whole of this material has been sorted, rearranged and indexed since the war, principally by Mr. C. Bunt, Miss Hodgson and Mr. J. Harris and is now available for reference by users of the library.

R.I.B.A. Diary

TUESDAY 25 DECEMBER and WEDNESDAY 26 DECEMBER. R.I.B.A. offices closed for Christmas holiday. Library and canteen closed 24, 25 and 26 December.

FRIDAY 28 DECEMBER. 7 p.m. Exhibition *Architectural Treasures of Czechoslovakia* closes.

TUESDAY 8 JANUARY. 6 p.m. Special General Meeting (see Notes and Notices, p. 78). Followed by General Meeting. Announcement of Award of Prizes and Studentships. *Futurism and Modern Architecture*—Reyner Banham.

Extensions to the R.I.B.A. Building

SINCE MR. G. GREY WORNUM [*F*] won the competition for the new headquarters in 1932, membership of the Royal Institute has risen by 154 per cent and this expansion has necessitated proportionate enlargement of premises due to the increased activities and administration. By adding two more floors to No. 66, 10,000 sq. ft. of floor space will be made available, in addition to the improved accommodation in No. 68 after rebuilding.

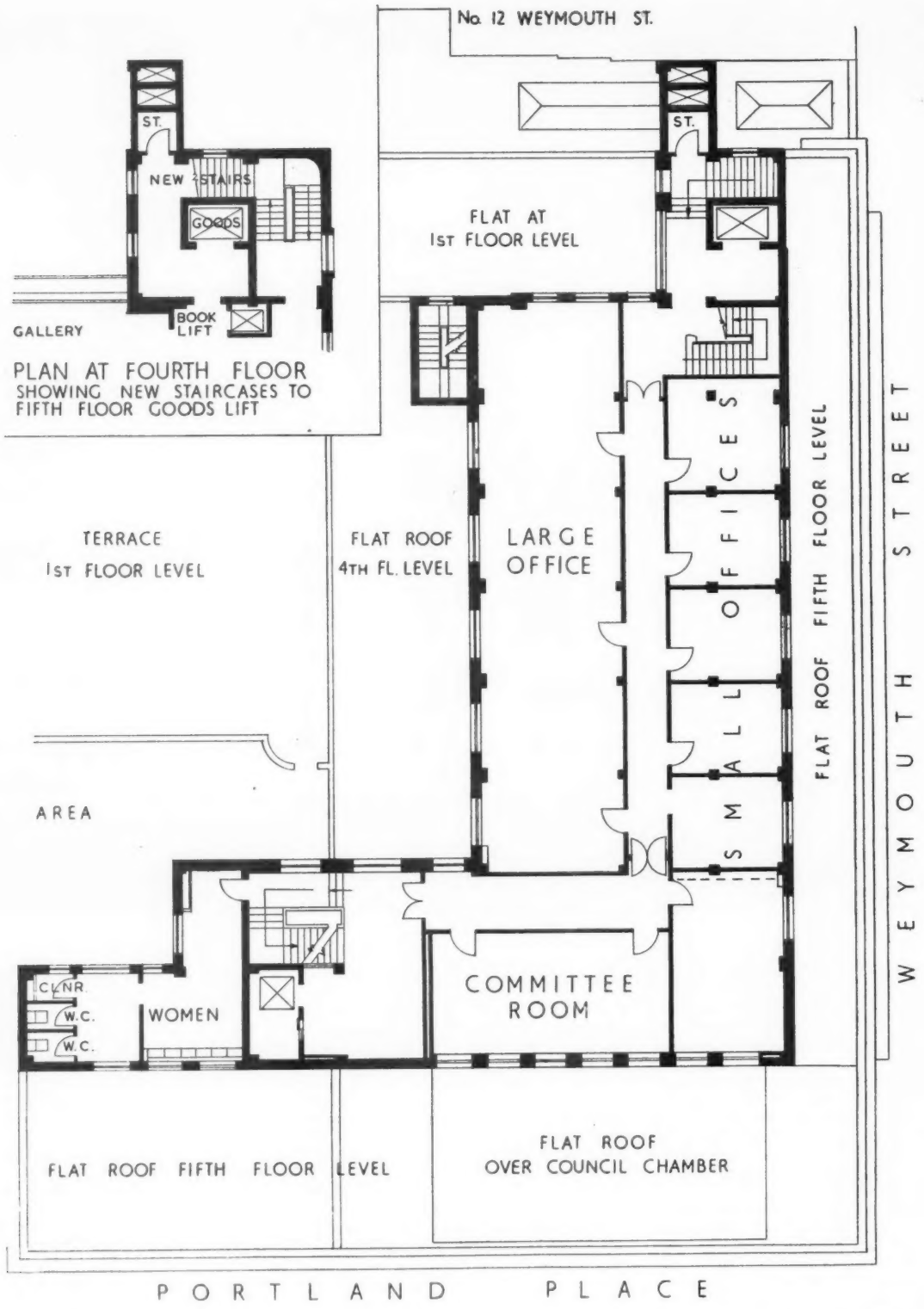
This need was largely foreseen, and a drawing by J. D. M. Harvey is reproduced to show an early design which includes 5th and 6th floors and a rebuilt No. 68. It will be seen from the perspective above, which was specially drawn by Mr. B. R. Williams [*A*] of the firm of Playne and Lacey, how much less dominant the new floors will look than in the earlier scheme, illustrated on p. 55. This revised design follows closely that which was prepared by Mr. Grey Wornum in 1949.

The plans which were approved by the Council at their meeting of 6 November follow the general arrangement of those prepared by Mr. Wornum for the purpose of obtaining planning permission in 1948 from the L.C.C. Since the retirement of Mr. Wornum from ill health the work has been carried on by Mr. Edward Playne, D.S.C. [*F*], of Messrs. Playne and Lacey.

While the plans which are presented in this article are largely self-explanatory, it may be worth mentioning that they include provision for new offices for the Architects' Registration Council on the first floor mezzanine and first floor of the rebuilt No. 68 with access from a ground floor entrance hall. Provision is made on each of the new fifth and sixth floors of No. 66 for a large committee room. The remainder of the fifth floor will be space for offices and small committee rooms. There will be a foyer landing with top lighting on the sixth floor to provide an additional exhibition area. Provision is also made on this floor for a new members' dining room and kitchen; the present one on the second floor being merely a makeshift.

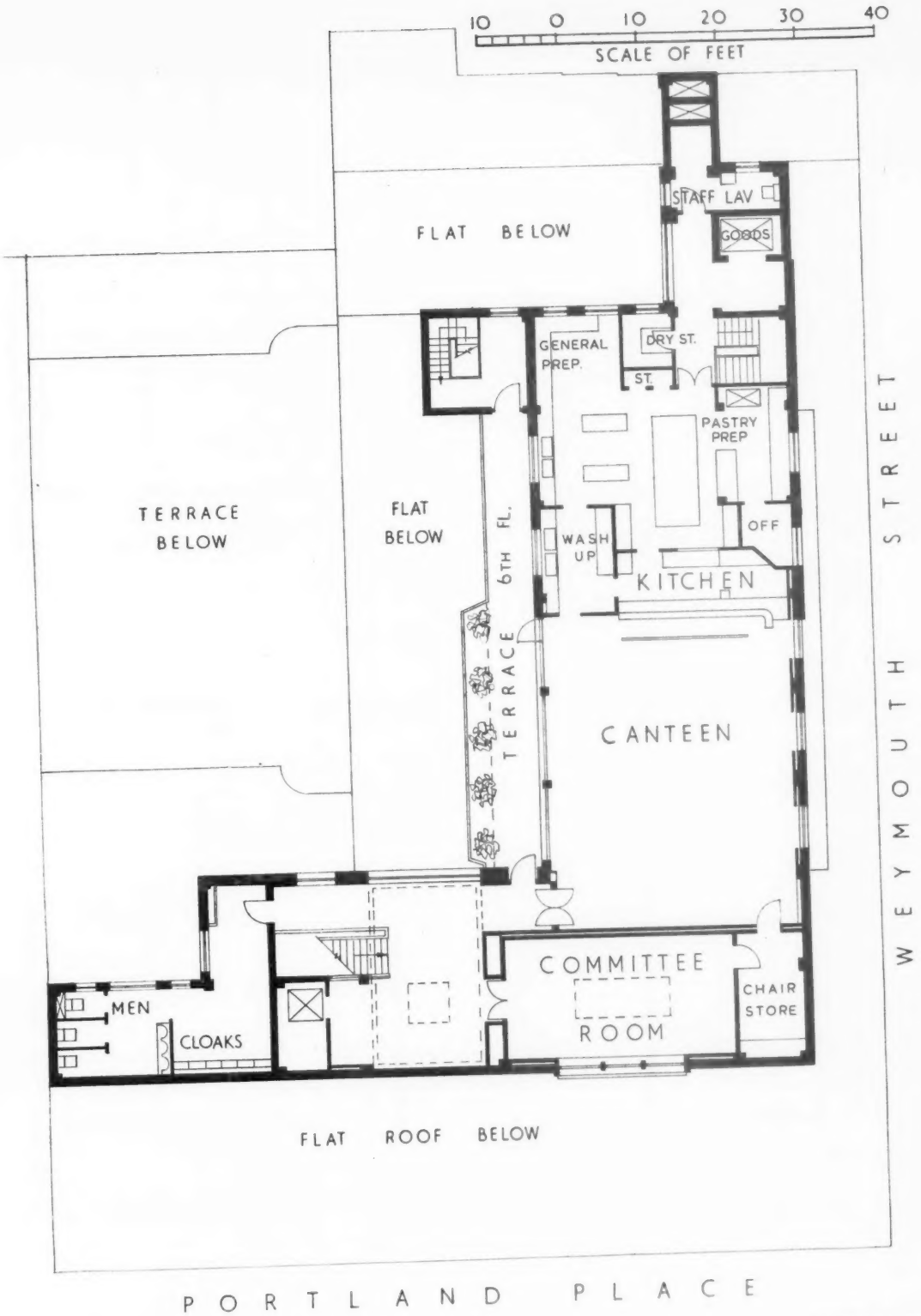
Construction for the new contracts will follow that of the 1932 building, i.e.: steel-framed with Portland stone façade.

Messrs. Ashby and Horner, who built No. 66, are the contractors for No. 68, which is due for completion by January 1958. Work on the 5th and 6th floors of No. 66 will start before the completion of No. 68, but they are not expected to be ready before the late spring of 1959.



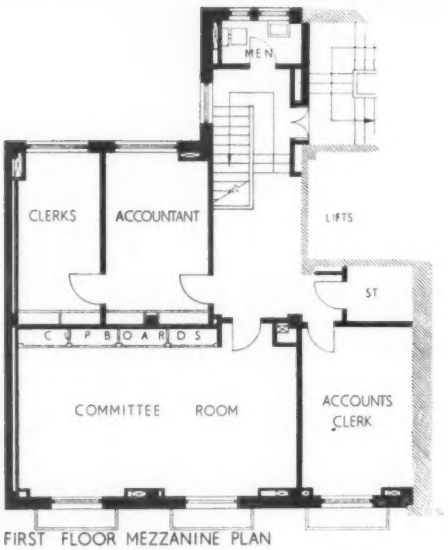
FIFTH FLOOR

Extension of R.I.B.A. Premises:

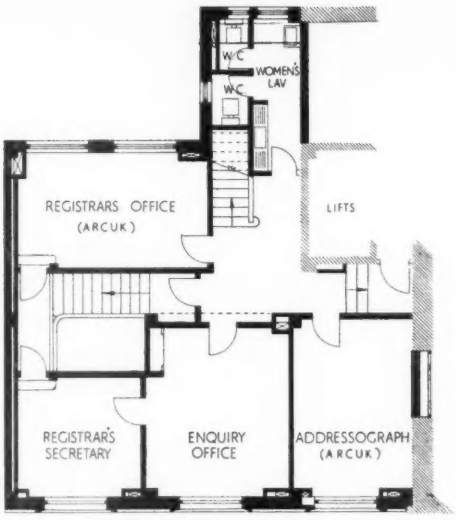


No. 66 Portland Place

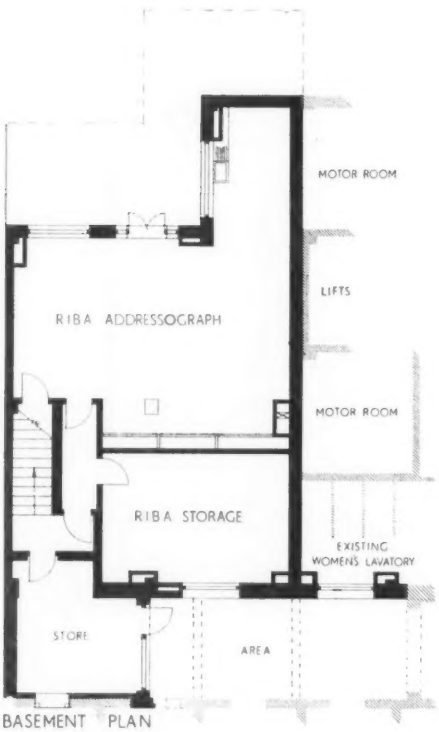
SIXTH FLOOR



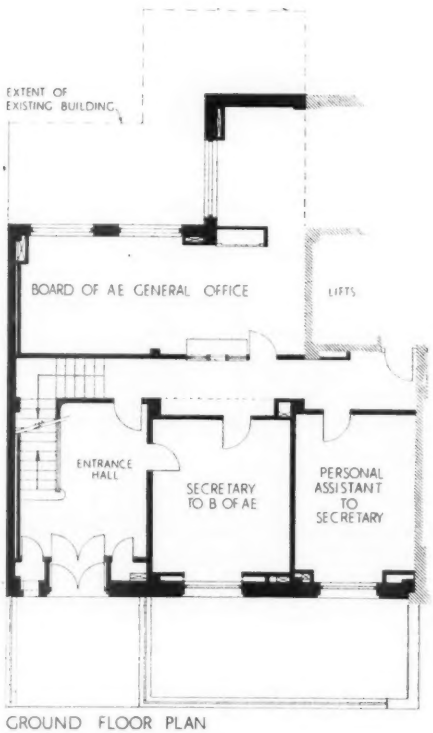
FIRST FLOOR MEZZANINE PLAN



FIRST FLOOR PLAN



BASEMENT PLAN

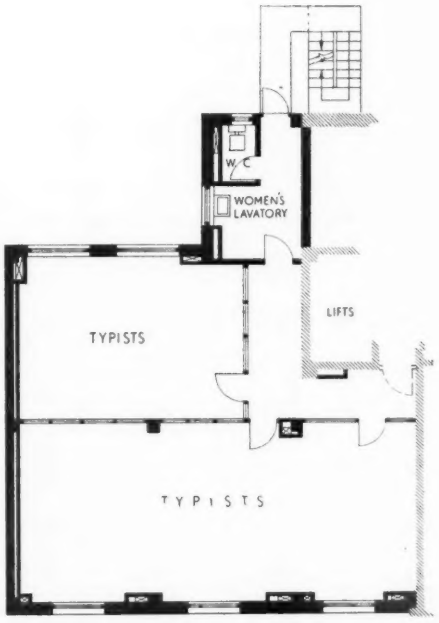


GROUND FLOOR PLAN

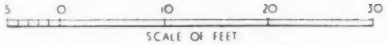
Rebuilding N

THIRD FLOOR PLAN

FOURTH FLOOR PLAN



SECOND FLOOR PLAN

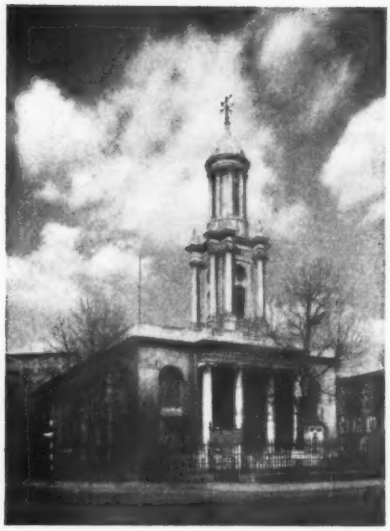


The perspective submitted subsequent to the 1931 competition. The original was by J. D. M. Harvey.

No. 68 Portland Place

Conversion of Holy Trinity, Marylebone for new Headquarters of the S.P.C.K.

Architects: Handisyde and Taylor [*AA*]



HOLY TRINITY, MARYLEBONE, stands on an island site opposite Gt. Portland Street Station.

It was designed by Sir John Soane to accommodate 2,000 people and was consecrated in 1829. An east end apse was added later. After the last war its importance dwindled and when its last vicar left in 1951 the church was entrusted to the Rector of St. Marylebone and the two parishes have been united by an Order in Council.

The Society for Promoting Christian Knowledge had outgrown their old headquarters in Northumberland Avenue, which they have sold. Holy Trinity, sited on a Ring road, was considered ideal for a new headquarters. Permission was given by the Bishop of London to the S.P.C.K. to proceed, and the church was closed in November 1955 and the work of conversion started soon afterwards.

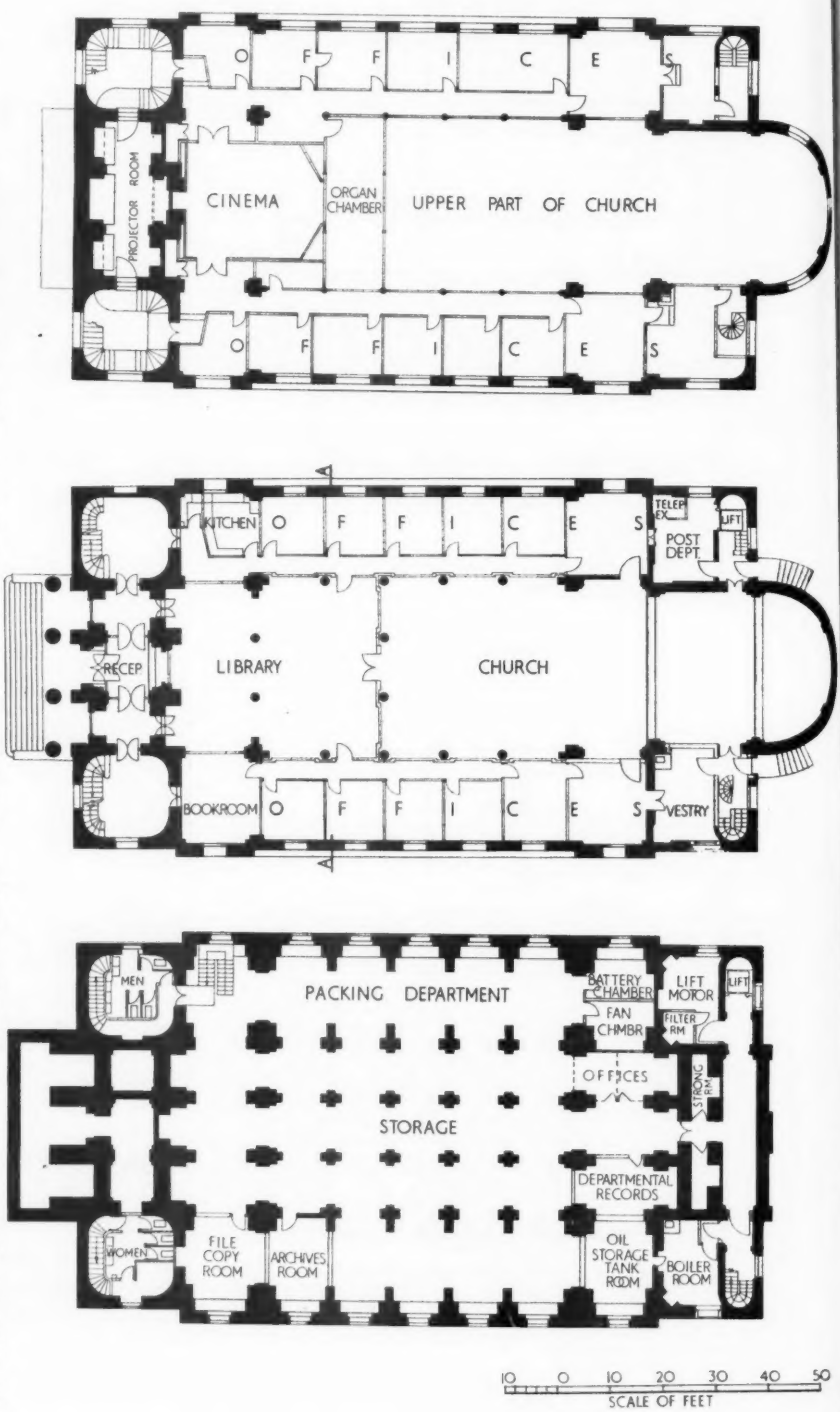
On 26 October, The Bishop of London formally opened the H.Q., which now houses all the Society's head office staff of about 100. The church remains a place of worship seating 200 people for daily services open to the public.

The most difficult problem was the first decision: whether conversion of the church to include a range of offices should be attempted at all. There were two questions:

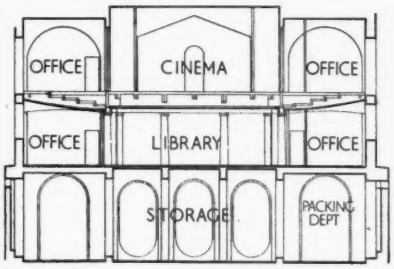
1. Should such a conversion be done to a Soane church?
2. Could the very dark church be made to provide reasonable office accommodation together with other requirements?

It was accepted by all concerned, quite apart from any requirements of the Planning and Historic Monuments authorities, that if any conversion were done the exterior of the church must be left virtually unaltered.

It was clear that the office accommodation would have to be in the existing side galleries and in the side aisles beneath the galleries. The existing windows appeared to let in very little daylight and were, moreover, badly shaded by rather fine plane



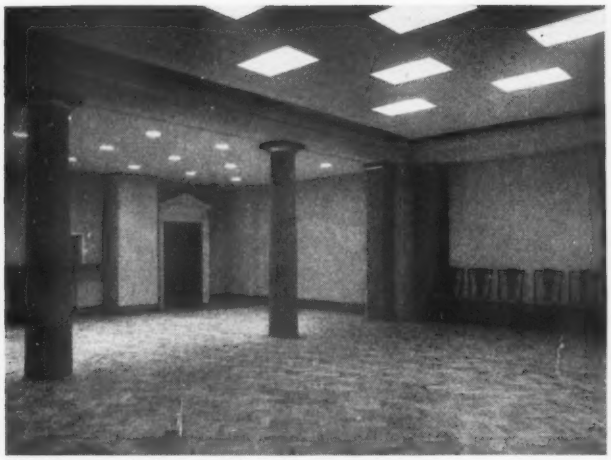
One of the corridors at gallery level



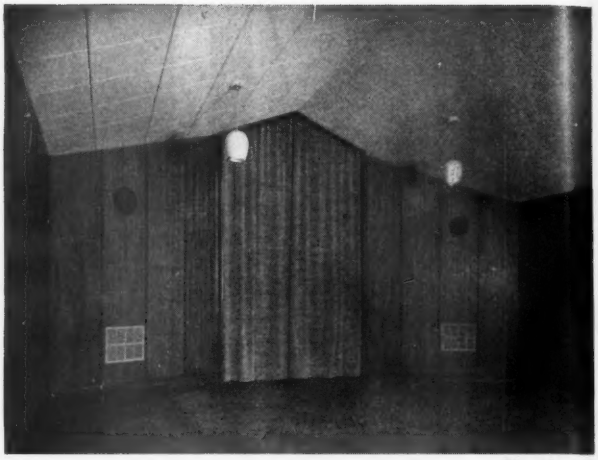
Section AA

The crypt converted for use as warehouse

View from chancel after and before conversion



The ante-church: library and conference room



The cinema

trees. A rough mock-up office was constructed and it was decided that with decorations kept light in colour the offices would be adequately lighted if the trees were thinned and if the slightly obscured glass in the windows, fixed in leaded lights within the main iron glazing bars, was replaced by clear glass glazed into the iron without the leadwork.

Apart from the felling of a small number of the trees which proved to be unsafe, only a limited amount of careful pruning has been done—with the consent and approval of the L.C.C.

The alteration to the windows leaves the main design very much as it was, though it has been necessary to inset into the old pattern of glazing new opening lights.

These steps, together with light-coloured decoration within the offices, have resulted in a standard of lighting almost unbelievable to anyone who saw the interior before work began.

Apart from the offices in and under the galleries the following accommodation was required:—

i. A very large book store and packing department. This is in the old crypt which was just high enough to make possible a double storey book-stack arrangement which is constructed of Dexion metal angles, including the 'gallery' access to the upper level.

ii. A library/conference room. This is planned in the west end of the old nave.

iii. A private cinema for the showing of religious films. This is at first floor level, above part of the library.

iv. Lavatory accommodation. This has been arranged at mezzanine level between ground floor and crypt and within the two existing west end staircase wells.

v. A chapel for the use of the Society and also for the continuing use of the public who have full access to services arranged by the Society. The old sanctuary and choir and all the nave except two bays at the west end have been retained as the chapel. A fine organ has been removed from the original place in the choir and re-built in a gallery at the west end. The fine original organ casing has also been repaired and moved.

The reduced church looking towards the Victorian east end

After a small preliminary contract to cover removal of pews and other preparatory work the main contract started on 9 January 1956 and was completed for the opening ceremony on 26 October 1956, with the exception of final work to the organ and some of the external stone repairs and other external works such as paving.

There were no special construction features but numerous small problems in converting an old building to new uses. The existing gallery construction was retained with the underside lined with plasterboard to provide the required fire resistance. Electrical installation is entirely new. A new heating system is run from an oil-fired boiler. Offices are heated by radiators, crypt, church and cinema are heated by warm air.

Although all decayed stone has not been repaired a great deal of exterior restoration has been done. Much that was necessary was because of the splitting of the old stone by expansion of rusting iron cramps.

The main contract was for £65,853.

The architects were Handisyde & Taylor.
The structural consultants were Clarke Nicholls & Marcel.
The quantity surveyors were Cameron & Middleton.
The general contractors were Messrs. Griggs & Son.

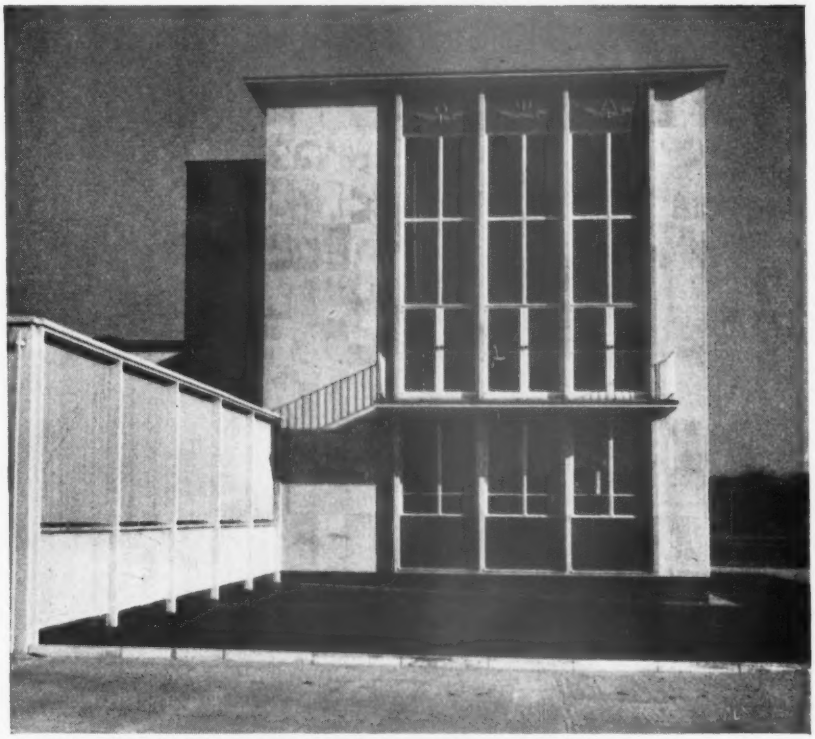
G.K.N. Laboratory, Lanesfield, Wolverhampton

Architects: Lavender, Twentyman and Percy [*F*/*A*]

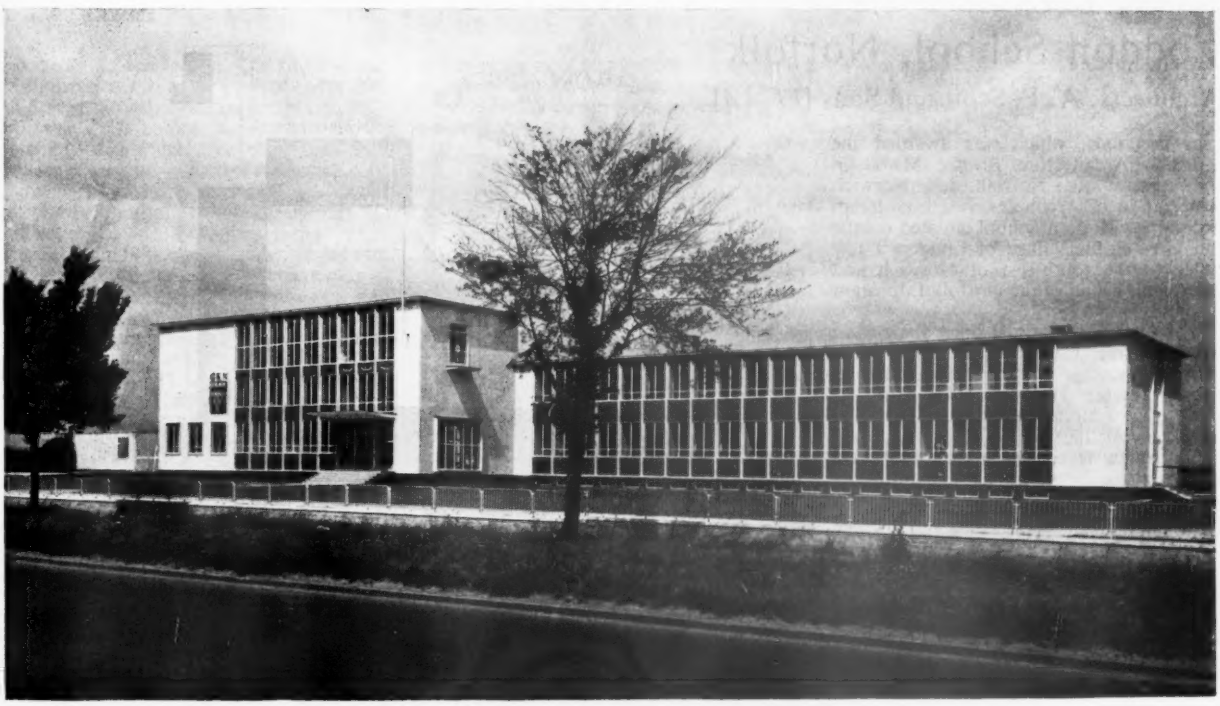
THIS BUILDING was awarded the R.I.B.A. Architecture Bronze Medal in the area of the Birmingham and Five Counties Architectural Association. It is the central research laboratory for the Guest, Keen and Nettlefold group of companies and was the subject of an illustrated article in the JOURNAL of August 1954. The architects were Messrs. Lavender, Twentyman and Percy (A. R. Twentyman [*F*] and C. G. Percy [*A*]).

The site is on a main arterial road, where the advertising value is of some importance. The building owners wished to take advantage of this and the facing materials used are therefore of higher quality than is usual for this type of building. The concrete mullions and the blank concrete walls are faced with Portland stone slabs (used as permanent shuttering), Portland being chosen for its well-known self-cleaning properties when used on a south-west wall. The spandrels are of reeded aluminium painted blue, windows are white and the recessed plinth is faced with brown faience slabs.

The system of construction adopted used structural concrete mullions at 5 ft. 7½ in. centres and hollow tile floors spanning from outside walls to spine beams. The thin concrete walls below windows and the absence of stanchions facilitated the placing of the horizontal ducts below windows.



North elevation of administrative block, showing conference hall windows



The main entrance with administrative block on the left

Loddon School, Norfolk

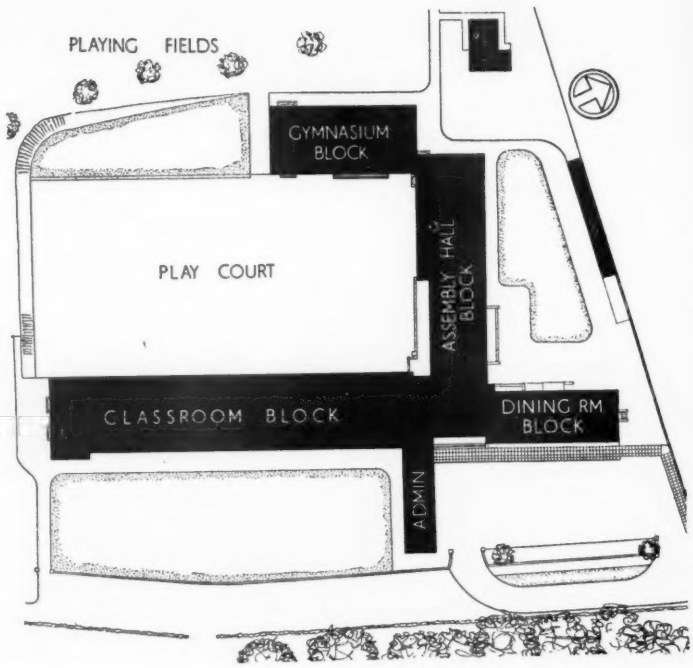
Architects: A. F. Scott and Sons [*FF/AA*]

THIS BUILDING, which was awarded the R.I.B.A. Architecture Bronze Medal in the area of the Norfolk and Norwich Association of Architects, is a two-stream Secondary Modern School situated on the outskirts of the village of Loddon a few miles to the south-east of Norwich and erected on behalf of the Norfolk Education Committee.

The site, fairly flat and open apart from a belt of trees which separates the school from the vicarage and the village, occupies about 11 acres. The school was placed as close as possible to the village, thus taking advantage of the trees which, by enclosing the entrance forecourt, give an intimate character to the approaches, conforming rather more to village scale and feeling.

The plan is a straightforward interpretation of the Committee's requirements with the two-storey main teaching block facing the tree belt to the south-east. This, with the wide overhangs above the windows, helps to restrict glare in the classrooms.

The two-storey dining hall block is a continuation of the teaching block but divided from it by the main entrance



The main teaching and administrative blocks, with dining hall block behind

recessed into the façade. The single-storey administrative block projects forward adjoining the main entrance.

Immediately behind the entrance is the assembly hall which with the gymnasium buildings beyond and the teaching block frame and protect the playcourts. The playing fields adjoin the gymnasium.

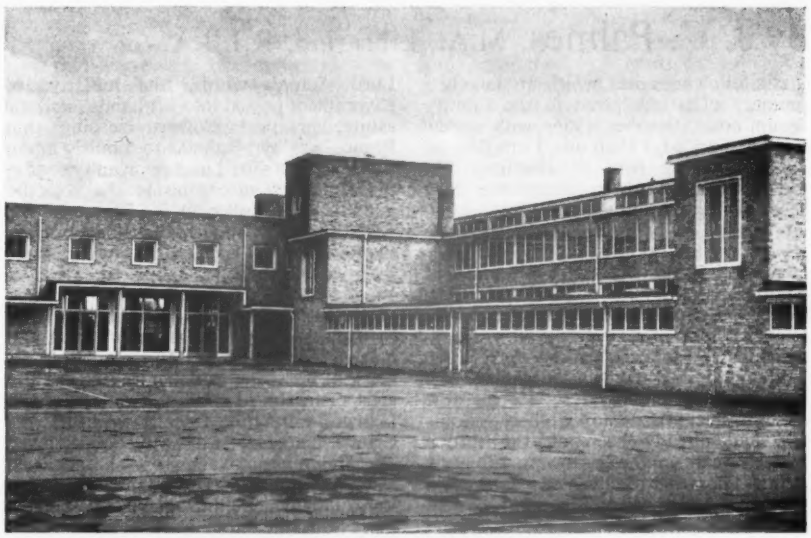
The elevations, relatively simple compositions, are of necessity rather spread out. An attempt therefore has been made to create interest by the integration and placing of the main plan units, by providing contrast in the fenestration of adjacent façades (so far as functionally possible) and by accenting the main approaches to the building. Homogeneity has been attempted by the repetition of units and by limiting the number of window variants.

Colour, besides being used to accentuate the entrances, has been employed to help give a bright and cheerful building which would appeal to the children using the school.

The warm golden-brown facing bricks, chosen for colour variety and texture, were obtained from a local kiln, Gisleham in Suffolk, and the imitation stone surrounds were also manufactured in the area.

Being in an agricultural locality, as much scope as possible was given to the planting of flowering trees and shrubs and provision of lawns and flower borders. All flowers, borders and gardens are tended by the children themselves.

The architects were A. F. Scott and Sons (E. W. B. Scott [*F*], T. G. Scott, M.C. [*F*], P. J. Arnold [*A*], K. A. Brewster [*A*] and A. L. Cobb).



The assembly hall and main teaching block from the playcourt

Veüe des Jardins du Palais des Thuilleries,
du costé du Cours de la Reyne.
Prospectus hortorum Palatij, vulgò dicti les Thuilleries,
a parte Ambulacri regij.

The Tuileries in 1673, drawn and engraved by Israel Silvestre. The Palace was burnt in the Commune riots of 1871, all traces of the ruins being removed in 1884. The view is from the Cours de la Reine (now the Place de la Concorde)

The Engravings of the Cabinet du Roi

By J. C. Palmes, M.A., Librarian, R.I.B.A.

IN THE following notes, which are largely a summary of a talk given to the Library Group on 8 October 1956, with a few comments added, I shall not, I imagine, be saying anything new or startling. My principal object has been to assemble a few pieces of information about an interesting, but minor, by-product of the Colbert-Lebrun artistic dictatorship. My secondary intention is to give an airing to one of the more remarkable possessions of the R.I.B.A. Library, which because of its weight and size rarely emerges from a cupboard in the Librarian's room.

When Mazarin died in March 1661, he bequeathed to the royal service an able assistant, Jean-Baptiste Colbert. Louis XIV had already been on the throne eighteen years and was now in his early twenties—a rather ill-educated young man, but possessing every other quality needed to make him a great king, and determined to be the greatest monarch on earth. In Lord Acton's words, 'the initiative of government passed into his hands', and the astute, practical Colbert, sensing that France was sympathetic to Louis's ambitions, at once seized his opportunity to play the key part in organising the splendid autocracy that followed.

Within a few months Nicolas Fouquet, the Surintendant des Finances, whose more than regal style of living at Vaux-le-Vicomte had attracted the envious and suspicious eyes of Louis, had been exposed by Colbert, arrested for fraud, tried and incarcerated for life at Pignerole by express order of the King. Fouquet's architects and artists, notably Le Vaux, Le Nôtre and Lebrun, were now free to work for the Crown. The first two were soon engaged on preliminary work for altering and extending Louis XIII's country house at Versailles, which his son, who associated Paris with the humiliations of the Royal family during the troubles of the Fronde, much preferred to the Louvre and the Tuileries.

Lebrun of course was also to play a no less prominent role in embellishing Versailles, but here we are concerned with him as the chief executive of Colbert's plan to co-ordinate the arts in serving and glorifying the French monarchy, the outward symbol of the splendour and prosperity of France. Lebrun may not have been a genius but he was a painter of majestic facility as well as an accomplished designer in many of the sister arts. He was precisely the man to further the schemes of Colbert who, in addition to the office of Controller-General of Finance, had by 1664 acquired the post of Surintendant des Bâtiments, and was a kind of glorified Minister of Works with extraordinary powers. More than a year earlier he had established on the premises of the old Gobelins tapestry factory the Manufacture des Meubles de la Couronne. This remark-

The great west front of Versailles drawn and engraved by Israel Silvestre (1621–91) in 1682, shortly after its completion by Jules-Hardouin Mansart

able institution now began to produce not only tapestries, although these continued to be a highly important product, but everything required to furnish the royal palaces. Lebrun, appointed Premier Peintre du Roi in 1664, was made director, and closely supervised the processes of each craft, himself providing the designs. Eventually about 250 artists and craftsmen 'une élite d'ouvriers d'art', were employed in addition to apprentices.

To the Gobelins was added a workshop of engravers. This probably occurred in 1667, the year in which the constitution of the Manufactory was officially drawn up, and which also saw the purchase by Colbert for the Crown of the huge collection of engravings of Michel de Marolles, Abbé de Villeloin. The acquisition of this collection really marks the foundation of the Cabinet des Estampes, later to become a department of the Royal Library and ultimately of the Bibliothèque Nationale.

The function of the engravers of the Atelier des Gobelins was to build up a collection of plates which, deposited with the Cabinet des Estampes, enabled presentation engravings to be made in the name of the King whenever they might be needed. It was these engravings which formed the Cabinet du Roi. They were also available for sale to the general public, and LE MERCURE GALANT in its issue for August 1699 quotes the prices, which were remarkably, and no doubt deliberately, low.

Most authorities seem to be agreed that twenty-three volumes in this series appeared, all but one of them large folios of uniform size. The exception was an album of much smaller format, which contained the engravings of Sebastien Le Clerc of the Labyrinthe of Versailles. It is clear however that these sets of engravings were not always bound in the same way. For example, in the R.I.B.A. Collection, Volumes 15 and 16 form a single book, while the forty-one plates of Le Clerc's Labyrinthe are included in Volume 13.

The dates of publication also present certain problems. The reference books generally give these as 1670 to 1683 (the year of Colbert's death), but the three sets which I have been able to examine contain engravings dated as late 1710, while some of the events recorded occurred in the late 1690's. Such ambiguities however cannot obscure the single-minded intention behind the Cabinet du Roi, which was to bear witness to the glory of Louis XIV, invincible conqueror and magnanimous protector of the arts.

From a brief entry in the Report of the Council of the R.I.B.A. to the Annual General Meeting of 7 May 1849 we know that the set now in the Institute Library was bought at the sale of the Stowe Library in January of that year. It is a good set, the great majority of the many hundred engravings being fine impressions. The bindings are all in sound condition—they have lately received some additional attention—and undoubtedly date from the end of Louis XIV's reign. They are plainly and conventionally decorated. On the spines is the King's monogram, and on the front and back the royal cartouche, a typical ornamental motif of the period, comprising the Fleur de Lys on a shield, surrounded by the chains of St. Michel and the St. Esprit.

I shall make no attempt to record in detail the contents of each volume. It would be difficult to think of anything more tedious. But a few signposts may shorten an otherwise exhausting journey for the reader trying to find his way through the Cabinet du Roi for the first time, for there is no reliable index and, apart from the volume recording the royal pictures, hardly any explanatory text.

The first five (and some of the later) volumes are engravings from designs for tapestries. The subjects are generally the triumphant campaigns in the Low Countries, Germany and Italy, before the Treaty of Westphalia in 1648, interspersed with a certain number of landscapes (Volume 3) and some architecturally unreliable impressions of the royal châteaux

Frontispiece, engraved by Rousselet, to Volume 9, which illustrates the Carrousel (or pageant) of 1662

(Volume 2). The original draughtsman in most of these cases was Adam-François Van der Meulen, an indefatigable hand at battles, and the engravers are his fellow Flemings, Huchtenburgh, Boudewyns, Van Schuppen and Genoels, all of whom are known to have been working at the Gobelins in 1667 on tapestry designs, although the Bonnart family, later more familiar as exponents of La Gravure de Mode, is also represented, and many others, including Nicolas Cochin. The latter, who collaborated with the Chevalier de Beaulieu in producing military-patriotic pieces, is not to be confused with the more celebrated (and certainly related) Charles Nicolas Cochin (father and son), master engravers of a later period.

In Volume 6 (the Cabinet des Médailles) La Boissière records with almost painful precision the King's collection of medals. It may well be one of the dullest books for its size ever published.

Volume 2 contains one item of great interest. This is an engraving of a view by Van der Meulen of the Seine from the Pont Neuf, at this period the hub of Parisian life. The artist is looking downstream with his back to the Place Dauphine. On the right is Le Vau's ungainly riverfront of the Louvre, and on the left his very successful and still surviving Collège des Quatre Nations (now the Institut de France), begun in 1665 and, so far as one can judge, largely finished at the time when the picture was drawn. Behind can be seen under scaffolding Guarini's church of the Théatins, on which work was started in 1662. It is difficult to date this view exactly. There is no sign of the east colonnade of the Louvre built between the end of 1667 and 1670, and in any case Van der Meulen was not much good at drawing buildings. An estimated date of 1667 however would probably not be far out.

With Volume 7 we are again at war, following the events which led to the Treaty of the Pyrenees in 1659, and in Volume 8 the subject is once more the prowess of French arms on land and sea—the victories, by now all too rare, of the campaigns ending with the Peace of Ryswick in 1697.

Volume 9, one of the finest of the series, depicts the celebrated Carrousel of 1662, superbly engraved by François Chauveau in 1670. The frontispiece (by Rousselet) consists of a bust of Louis set in imagination before the Place des Vosges, built under Henri IV fifty years earlier, and known in the 17th century as the Place Royale du Marais. In this volume are also several delightful views of the Tuileries and Paris street scenes, which remind us how little the appearance of French towns has changed in three centuries.

Volume 10 is concerned with statues and busts, many of them in the Tuileries. Etienne Baudet and Claude Mellan are the principal engravers.

Volume 11 is important since it records the stages of building the château of Versailles. It includes a plan of the park in about 1665 by the royal cartographer, F. de Lapointe, to which Pierre de Nolhac refers as the earliest surviving record of the lay-out of the gardens. This plan makes it clear that Le Nôtre had wasted no time in getting to work, and that his general scheme was already fixed, only minor modifications being made afterwards. This volume also contains several beautiful plates of the palace by Israel Silvestre, C. Simonneau's fine series of Lebrun's Great Staircase and Gérard Audran's masterly engraving of Mignard's ceiling for the gallery of the King's apartments. The latter, with its exquisite gradations of light and shade, suggests an 18th rather than a 17th century technique.

Campaigns in the 1640's are the order of the day in Volume 12, and in 13 we visit the grottoes and labyrinths of Versailles guided by the hands of many engravers: Jean Le Pautre and his son, Pierre, later a leading architect in J.-H. Mansart's team and usually confused in the reference books with his cousin Pierre, the sculptor (son of another architect, Antoine); François Chauveau; Sebastien Le Clerc, celebrated as a book illustrator; Jean Edelinck (brother of Gérard, Nanteuil's protégé): Silvestre, Baudet, Picart, de Chastillon, Simonneau le Jeune.

The royal fêtes at Versailles are the subject of Volume 14, which is certainly the best-known and possibly the most fascinating of the collection. It records the Plaisirs de l'Ile Enchantée, given in May 1664 before the Queen and the Queen Mother,

TABLEAUX DE LA VOUTE DE LA GALERIE DU PETIT APARTEMENT DU ROY A VERSAILLES, PEINTS PAR P. MIGNARD.
Apollon distribuë des recompenses aux Sciences et aux Arts, et Minerue couronne le Genie de la France

Engraving by Gérard Audran (1640–1703) of Mignard's ceiling for the gallery of the Petit Appartement du Roi, Versailles.

The Pont Neuf (about 1667) drawn by A.-F. Van der Meulen and engraved by Huchtenburgh

but really for Louise de la Vallière; the Grand Divertissement Royal—Lully's *Alceste* in the Cour de Marbre—in 1668, the last great occasion in the Versailles of Louis XIII, before the building of the Château Neuf; Molière's *Malade Imaginaire* played in 1669 in the Grotto of Thétis; the festivities of July 1774 to celebrate the conquest of Franche-Comté. Israel Silvestre, Pierre Le Pautre and François Chauveau are the engravers of these splendid occasions.

Volume 15 records the royal collection of pictures and contains some fine engravings by Gérard Edelinck. Volume 16 performs the same service for the statues and busts of Versailles, the Louvre and the Tuileries.

There is an excellent series on the Tuileries by Silvestre in Volume 17, which also contains Sebastien Le Clerc's familiar engraving of work in progress on the east front of the Louvre, and a plan of the Louvre, surprisingly by Jean Bérain. The latter was always keen to graduate from ornamentalism to architecture, but remained to the end a pillar of the 'Menus Plaisirs', the curiously named government office responsible for temporary construction of all kinds needed for royal festivities.

In the second half of this volume is a magnificent series of plates of details, panelling, arabesques, doors, doorheads, in the Louvre and Tuileries, in which Bérain (among others) displays immense talent as a designer of decoration. Several of these plates seem closer in feeling to *Le Style Louis XV* than the more conventional standards of Louis XIV's time. *Singeries* are already in evidence.

Volume 18 is devoted to more royal palaces, among which are some interesting perspectives, by Silvestre, Jean Marot and La Boissière, of the Palais Royal, Vincennes (with Le Vau's long demolished entrance), Madrid and Monceaux (both gone), Chambord and St. Germain. There are also plans of Fontainebleau, Blois and Compiègne, drawn and engraved by François Dorbay, Le Vau's nephew and chief assistant, who became in 1671 'architecte ordinaire du roi'.

Sebastien Le Clerc, next to Jean Le Pautre the most prolific of all French 17th century engravers, is the chief contributor to Volume 19, which contains designs for tapestries depicting important events of the reign. Volume 20 illustrates the campaigns in the Rhineland and Franche-Comté of the 1670's, with the warrior-king a gallant and conspicuous figure throughout. The famous Passage du Rhin is suitably publicised.

The Invalides hospital, begun in 1670 to the designs of Libéral Bruant, is depicted in very fine engravings by Daniel and Jean Marot, Jean Le Pautre and Gérard Scotin the younger, which form Volume 21.

Volume 22 (the last)—it may be No. 23 if Le Clerc's *Maze* is bound separately—is a mixed bag. There are some more battles, and several charming drawings of towns such as Metz, Verdun and Sedan, and a competent impression of the Collège des Quatre Nations, all by Silvestre. Included too are some not particularly distinguished engravings by one of the Audran family (possibly Gérard) of Lebrun's work in the chapel of the Château of Sceaux.

I have somehow arrived at the end of this rapid tour of the Cabinet du Roi without once referring to Vauban or Chapelain. Both most emphatically should have been mentioned: the first, because many of the *places-fortes* constructed by the great military architect are illustrated in these engravings; the second, because it was almost certainly on his advice—he was a very sensible man, although a wretched poet—that Colbert decided to use engravings for royal propaganda.

And what of the engravers themselves? They were people of considerable standing, recognised from 1655 as practitioners of a major art and free from the tyranny of the Guilds which beset so many minor artists and craftsmen. Theirs, too, was essentially a family calling. For instance, at least fifteen members of the Audran clan were engravers, and many other hardly less remarkable examples of inherited skill can be found. They were also inextricably intermingled by marriage with other engravers and with painters, architects and sculptors. In fact the genealogy of French artists in the 17th and 18th centuries is peculiarly involved. They all seem to be related to one another.

I have drawn on many sources in compiling these notes, but I am particularly indebted to the scholarship of Pierre de Nolhac, Emile Dacier, Roger-Armand Weigert, Fiske Kimball and Sir Anthony Blunt. I am grateful to the Courtauld Institute for allowing me to examine their copy of the catalogue of the Chalcographie de Musée du Louvre, from which I was able to find corroborative evidence for several of my suppositions.

Exhibition of Modern Portuguese Architecture

A SMALL TRAVELLING exhibition of Portuguese Modern Architecture, organised by the Portuguese National Secretariat for Information and the National Syndicate of Architects, was held recently at the Building Centre before going on to Glasgow, Lisbon and capital cities in Europe and America.

Some examples of materials in common use were included in the exhibition, among them some delightful ceramic tiles and mosaics.

Two shops in Lisbon (1955) are illustrated showing extensive use of mosaics. The architects for the bookshop were J. Bastos Coelho (who designed the exhibition), R. Modesto and J. Caetano. For the grocery below, the architect was C. Silva.

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialised branches of research and will willingly answer inquiries.

The Director, The Building Research Station, Garston, near Watford, Herts. Telephone: Garston 4040.

The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow. Telephone: Busby 1171.

The Director: The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101.

*The Director, the British Standards Institution, 2 Park Street, London, W.*1 *Telephone: Mayfair* 9000.

*The Director, The Building Centre, 26 Store Street, Tottenham Court Road, London, W.C.*1. *Telephone: Museum* 5400 (10 *lines*).

*The Director, The Scottish Building Centre, 425–7 Sauchiehall Street, Glasgow, C.*2. *Telephone: Douglas* 0372.

The Supira Chimney Terminal. In 1938 the Building Research Station published a note on smoky chimneys; in May 1950 the note was revised and published as B.R.S. Digest No. 18, and in October 1955 the Digest was again revised. The subject has therefore been well ventilated but cases of smoky chimneys still arise, and in the 1955 Digest the B.R.S. says that 'There is however no information available as to the type of pot or cowl that will give effective results under any particular set of conditions'. That remark however was made over a year ago and there is now on the British market a chimney terminal evolved in Switzerland after many years of scientific study of the problem. Over 800,000 of these terminals have been installed abroad.

As will be seen in the accompanying section the terminal, for a single stack, is louvred on all four sides, but the vents curve upwards and widen towards the inside, thus creating a low pressure area at the outlet of the flue and preventing excessive draughts that might otherwise be caused by strong winds. An important item is the deflector, a component shaped like an arrowhead, that is fitted across the top of the terminal; this diverts rain and downward winds towards the upper vents and maintains the upward draught by reducing the pressure inside the terminal. The top outlet is enlarged sufficiently to compensate for the space taken up by the deflector.

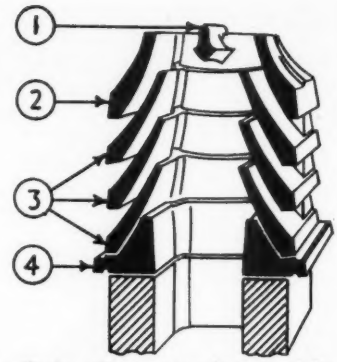
Recently a Press demonstration was given of the Supira terminal, using a model flue in which an upward draught was created by burning a special cartridge. Attached to the model was an instrument with a dial having a pointer which moved to minus or plus pressure according to the conditions existing in the flue. A portable electric blower was used and moved about to simulate wind blowing from various directions. When the model flue was used without the terminal, and with the blower being waved about to represent various wind conditions, the pointer on the gauge responded violently; the terminal was then put in place and the pointer remained practically still even when the blower was held so as to create a current of air down the open top of the terminal; the severest test of all.

It is claimed that these terminals often allow the height of stacks to be reduced and that they are little liable to become clogged with soot. Chimney sweeping can be carried out in the usual way.

The sole concessionaires for the Supira Chimney Terminal are Messrs. Omnia Constructions Ltd., of 121 London Wall, London, E.C.2, who can supply suitable terminals for multiple and block chimneys as well as for single flues.

FROST PRECAUTIONS. So much has been written about protecting water pipes against freezing that it seems unlikely that more can usefully be added on the subject. However, as it is always helpful to have information collected together, the following recent publications are of interest.

B.S. Code of Practice, CP99 (1956); **Frost Precautions for the Water and Sanitary Services in Buildings.** This is in five sections: general; general principles of protection; location of fittings; insulation; and draining facilities. Although the Code applies chiefly to new buildings, recommendations

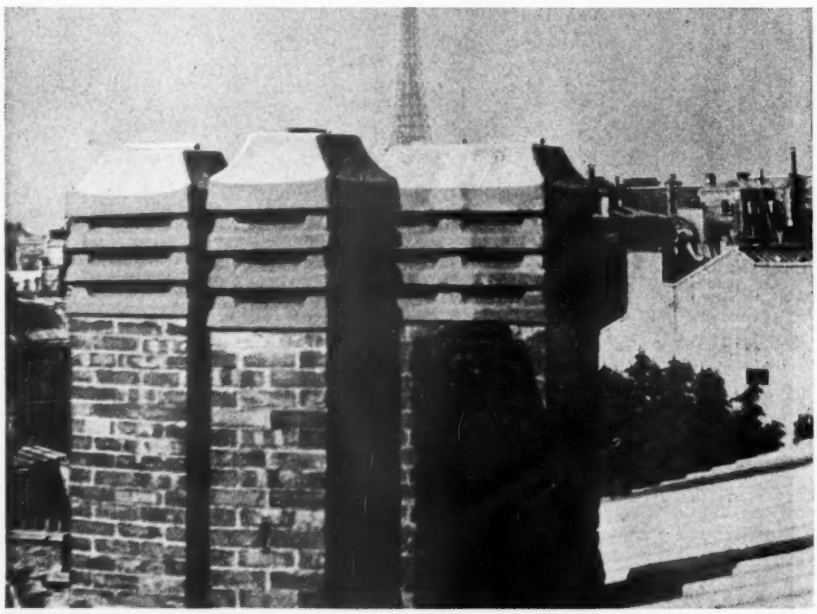


The Supira chimney terminal. 1, deflector; 2, crown unit; 3, intermediate A units; 4, base unit.

are given for dealing with existing water services, as far as may be practicable. A useful table gives the recommended minimum thickness of insulation for pipes of various sizes, according to the thermal conductivity (given in another table) of the material it is proposed to use.

M.o.W. Advisory Leaflet No. 41; **Frost Precautions in Household Water Supply.** This leaflet describes how water pipes, fittings and cisterns should be installed in new houses to be safe from damage by freezing, but recommendations are also given for improving existing installations. The leaflet mentions that to reduce the likelihood of w.c. traps freezing when the house is unoccupied it is a good idea to dissolve a handful of salt in a pint of hot water and pour it into the pan.

Fire after Frost. This leaflet of the Fire Protection Association deals with dangers that may arise after pipes have frozen, when


The Supira chimney terminal, showing units for single and multiflue stacks

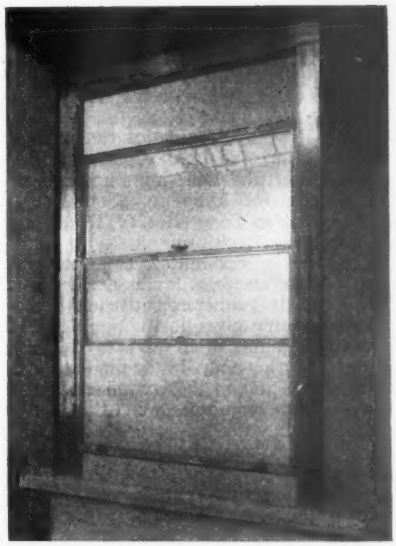
harassed householders may seek to restore their water supply by using blowlamps, lighted candles or flaming petrol-soaked rags to thaw their pipes or cisterns. The leaflet adds that it may not be safe to use oil stoves or lamps, hurricane lamps, electric fires, lighted candles or gas fires with long rubber flexes if there is any danger of their being knocked over. The Association states that the only safe methods of preventing freezing are thermal insulation of roof spaces, lagging of pipes, and turning off and draining the water, adding that these are the only safe measures 'until tradition is broken and plumbing is put in less vulnerable positions about the house'.

Ministry of Housing and Local Government Circular 57/56, dated 23 October 1956. This circular is addressed to statutory water undertakers, housing authorities and, for information, to county councils. The circular states that damage done by frost to houses in England and Wales was nearly 18 per cent in the case of the many council houses taken as a sample during the early months of this year. The survey disclosed that the main sites of damage were as follows: outside waterclosets and washhouses, 42 per cent; internal plumbing (other than rising mains), 38 per cent; rising mains, 20 per cent. The circular suggests the use of polythene pipe instead of metal, in certain positions, and calls attention to B.S. Code of Practice CP99 (1956), to Appendix G of the Technical Appendices to the *Housing Manual* 1949, and to the Memorandum on Thermal Insulation issued with Circular No. 19/53. Appendix G of the *Housing Manual* is included as an appendix to the circular for ease of reference.

B.S.I. and B.W.A.: Protect your Pipes from Frost. In collaboration with the British Waterworks Association, the British Standards Institution have produced a leaflet with the above title, giving information on what to do before and during a freezing period; it is addressed principally to householders and embodies the important points included in the other publications mentioned above.

Publicity Campaign. Recently the British Waterworks Association and the Water Companies' Association held a Press conference to announce that, with the support of the Institution of Water Engineers, they have formed a joint committee to institute a nation-wide publicity campaign on the subject of frost as it affects water services, with exhortations to everyone concerned to take precautionary measures to lessen the danger.

The Crittall Double-Hung Aluminium Sash. The Crittall Manufacturing Company Ltd. announce the introduction of an extruded aluminium alloy double-hung sash, Mark 1, which is counterbalanced by cast iron weights instead of by Unique balances, as in the company's Mark 2. This change enables the new window to be made in



The Crittall double-hung aluminium sash

sizes up to 8 ft. high and 5 ft. wide. The sashes can be obtained with or without glazing bars,

The sashes are weatherstripped and P.V.C. plastic weather fillets are fitted at the top of the upper sash, at the meeting rails and at the bottom of the lower sash. The glass is held in place by snap-in aluminium glazing beads. The sashes are fixed shut by a polished diecast aluminium sash-fastener.

Pulling down an upper sash is not always easy, especially if it is an old and slightly warped wood one, but in this Crittall aluminium window the upper sash is operated by a handle moving in a slide located in the lower part of the frame at a convenient height; two sash lifts are provided in the bottom rail of the lower sash.

Messrs. Crittall also call attention to their side-projected window, which they think is not so well known as the top or bottom projected types, although it makes cleaning easy and gives ample ventilation.

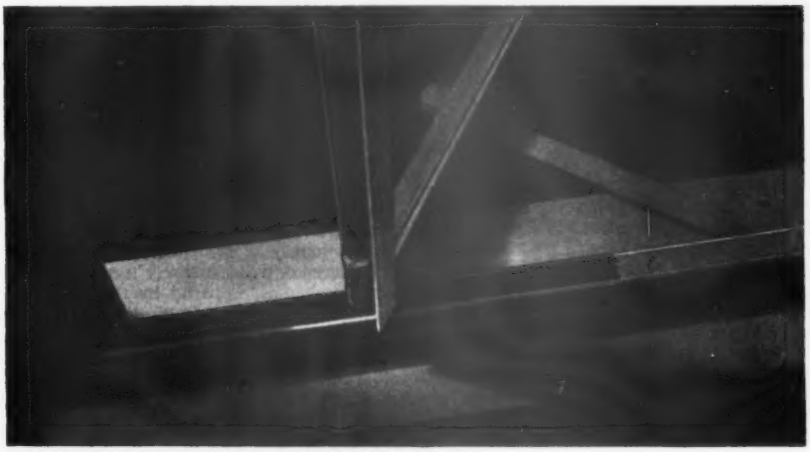
Messrs. Crittall's London address is 210 High Holborn, W.C.1, and their new Mark 1 window is described and illustrated in their leaflet No. 192.

Individual Heating by Thermax Panels. Complete under-floor heating is practically confined to new buildings, on account of the cost of installing it in existing buildings. In industrial buildings, where the floor is so often concrete, workers may feel that they are standing on a cold surface, whatever the general warmth may be. Messrs. Marley Concrete Ltd. have introduced special grade concrete panels, 2 ft. by 2 ft. by 2⅝ in., which are warmed by a low voltage electrical supply working through transformers. The panels have a hard-wearing surface with rounded corners and arrises, and they stand slightly above floor level on shallow legs. The heating elements are bonded permanently into the panels and are backed with insulating material. The weight of each panel is 70–75 lb., primary voltage 200–250 volts A.C., and the secondary is 9–12 volts with a loading of 70–100 watts. A low voltage transformer is supplied with the necessary cable and transformers can be supplied to feed current to several panels simultaneously.

Messrs. Marley state that consumption of current is about the same as that of a medium-size light bulb. The price of each panel is £10 19*s.* delivered to the nearest railway station. The address of the company is Peasmarsh, Guildford, Surrey.

British Standards Recently Published.

B.S. 1076: 1956. **Mastic Asphalt for Flooring (Limestone Aggregate).** In this revision the maximum and minimum limits for the softening point range have been raised, and the limit for the percentage gradings of fine aggregate has been altered. The percentage and size of coarse aggregates are specified, and some of the most important aspects of the application of mastic asphalt flooring, as recommended in the Code of Practice CP. 204 *In-situ Flooring*, have been given. Price 3*s.*



Sill mechanism of Crittall side-projected window

Concerning Committees

By Ronald Bradbury, Ph.D. [*F*]

THERE IS a north country saying that 'there's nowt so queer as folk'! This statement is never truer than when it is applied to a group of persons 'in committee'. The act of serving on a committee appears to do something to most individuals. It seems to change their personalities, making some feel bigger, brighter and better, whilst others, brave enough in other fields of human endeavour, cringe beneath a chairman's eagle eye. There is indeed a courage of the committee room as of the battlefield!

The result of all this change of personality business, this Dr. Jekyll and Mr. Hyde stuff, is that a committee, having regard to the sum of all the personalities of its constituent members, never seems to act collectively as one would expect it to do. Nor, on the other hand, does it arrive at decisions which are 'the averaged-out-normal' views of its members. Despite its simple dictionary definition as 'a body appointed or elected for some special business', a committee is a very complex organism, supra-human, with a will of its own and a code and pattern of behaviour entirely different from that of the individual. As soon as a committee settles down to its business at the command of the chairman's gavel, a mysterious 'plus' is added. It ceases to be a collection of separate individuals and becomes instead a group with a solidarity and personality all its own. We are, in fact, faced with the phenomenon of group-behaviour.

With a gradualness that has largely obscured the process, in architectural practice, as indeed in most other fields, the committee is replacing or has replaced already the individual as a means of making decisions and determining policy. Very seldom, whether he is in private practice or in the public service, does an architect deal today with a single individual on matters affecting his professional responsibilities. Most problems are 'matters for the committee to decide', whether they involve the receipt of instructions, the approval of a design or even appointments as architect. If, then, committees have such an important place in current practice, and there is no indication that any effective method of birth control can be devised to prevent them breeding and spreading further, surely it would be wise to think about them a little. As yet there are no B.S.S. on committees and no codes of practice or formulae are available on the subject of 'Committees, treatment of'! Yet experience teaches us that there do exist certain recognisable patterns of committee-behaviour and that there are some vague and generalised principles which, if appreciated, are often of practical assistance 'in committee'. In a tentative and elementary way, the following paragraph covers some of the points which may be of interest as an opening gambit to this study.

To give some shape, no matter how arbitrary, to our examination, let us deal with the subject under the following four headings: (*a*) The Differing Functions of Committees, (*b*) Types of Committees, (*c*) Reporting to Committee, (*d*) Recording a Committee's Decisions.

Basically, a committee can perform either of two functions. It can 'decide' or it can 'advise'. It is either executive and policy making and thus gives 'instructions' or else it functions purely in an advisory capacity to some superior body. In the first case it is a committee and in the second case it is really a sub-committee even though the prefix 'sub' may not be featured in fact in its title. Of course some committees can function in either capacity according to the particular subject under discussion and the extent of the powers delegated to them by a superior body.

The architect will encounter both types of committees and he will be a wise man if he moulds his presentation rather differently for 'real' committees and sub-committees. When dealing with a committee which has full executive powers, that is one empowered to accept or reject any proposal, the architect will define his case accordingly. He must realise that he is appearing before the final tribunal from which there can be no appeal. He must convince or fall. It seems to be a characteristic of most executive committees that they like their information 'neat' and undiluted with subsidiary issues. They prefer clear-cut alternatives and normally frown upon theoretical essays covering all the possible permutations and combinations. Nothing appears to upset such a committee more or to be more liable to get them bogged down than a plethora of subsidiary matters. (Incidentally, nothing is easier than to become bogged down with detail, as there are always individual committee members willing and anxious to raise such questions as the colour of the floor finishes to the lavatories before the main scheme has been accepted in outline, or possibly even before it has been discussed at all.) A chairman's primary aim on an executive committee is to get clear-cut decisions and to get them quickly, and an architect should bear this in mind when he is designing his method of presentation.

In the case of an advisory committee, however, the whole climate is quite different. An advisory committee likes to be able to justify its existence. It resents being considered or treated merely as a post office, where schemes prepared by the architect, or anyone else for that matter, are merely rubber-stamped and passed on to the senior body. It likes to be able to feel that at the stage where it comes into the picture there is still scope and margin for modification, and that it can imprint its personality upon the proposals submitted. Most sub-committees are very touchy on this point, and after all this is only human nature, for everyone, or at least nearly everyone, likes to feel he has had a finger in the pie. In planning one's method of presentation, therefore, to such a committee, this quality, no doubt due basically to a slight inferiority complex, must be taken into account.

Having dealt with the differing functions of committees, let us briefly now consider the character of committees, and, for the sake of convenience, divide them into three types, namely, (*a*) expert committees, (*b*) non-expert committees and (*c*) mixed committees. Let us define an expert committee as one wholly or mainly made up of members with a sound practical or professional knowledge of the subject-matter with which the committee is to deal, and a non-expert committee as one in which the majority of the members are ordinary individuals with no more knowledge of the subject to be dealt with than one would expect to be possessed by the ordinary man in the street. A mixed committee would be, of course, one in which there was a more or less exact balance between expert and lay members, and on average this type of committee is probably the most difficult with which to deal. Matters have of necessity to be presented with a bias towards one side of the committee or the other, with the result that in a mixed committee there are sure to be complaints that the reports are either too technical or too elementary. Moreover, conditions 'in committee' are also likely to be difficult. Fur soon flies when experts adopt the 'Of course, you could not expect to know' angle, or the lay members start a speech: 'I am only a simple man but these experts seem to forget——'.

On the other hand, although a committee of experts may have no difficulty in understanding the technical issues involved, the arguments among them are likely to be even more acrimonious because there may be two or more schools of thought on the subject, each bitterly opposed to the other, and determined not to give way as 'a matter of principle'. (Incidentally, when things become 'a matter of principle' in any committee, lay or expert, executive or advisory, look out for squalls and the hasty departure of reason through the nearest exit!)

On the whole there is much to be said for a lay committee even when decisions on technical matters have to be taken. Somehow that mysterious something which is added to a committee often appears to include a shrewd common sense and a nose for the right decision (although often for the wrong reasons). But whatever the merits or demerits of each type of committee—and individual committees will, of course, vary with the character and calibre of their members—it is wise to have clearly in mind the type of committee to which one is to report when preparing material to present to them, or appearing before them in person.

But whatever type of committee we are called upon to deal with, we shall soon come up against the problems of 'factions'; those sub-divisions of a committee in which

a number of individuals are bound together by some common interest or loyalty and tend to vote the party ticket or at least to follow the lead given by their chief spokesman. These 'factions' occur in committees in every walk of life and are not confined to politics. The feeling between factions may be just as strong and the groupings just as rigidly defined on a committee dealing with the building of a church hall as anywhere else. Notice must then be taken of the existence of these factions, and whilst the average architect is far too simple a soul to attempt to meddle with them or to try to play one off against the other, nevertheless it is useful to have some idea of the likely set-up of a committee. Obviously, it would be foolish to present one's proposals to a committee in such a way as to antagonise at the outset a majority of its members, although this does not mean on the other hand that in order to attempt to please one group, one need inevitably upset the remainder. Discretion and tact are the key words here.

But above all, whether factions do or do not exist, honesty in dealing with committees is just as desirable and perhaps even more essential then when dealing with individuals. There is an inherent 'group-suspicion' abroad in most committees. After all, one has set out to convince a number of people, not one, about something, and in a group there are more individuals to smell out any dishonesty of purpose or lack of sincerity and to bring it to the attention of the rest.

The problem of reporting to committees, or to put it more bluntly, of selling one's ideas to a committee, raises a number of issues. Basically, there are three methods of approach. First, the presentation may be wholly impersonal; that is, it may be confined wholly to a written report. Alternatively, it may be wholly verbal by appearing before a committee and explaining, without reference to any documents, what one's intentions are. Or, thirdly, it may be a combination of both, that is a written report as well as an appearance in person before the committee to explain one's scheme and to answer questions.

In certain exceptional instances the impersonal method may be the only one open to the architect and must perforce be accepted despite its limitations. Normally, however, the other two courses are both possible. Each of the three methods has advantages and disadvantages, but, by and large, the third is the best. But even if a personal appearance is to be made, experience indicates that the report itself should be as complete as possible and should read as if personal explanations were not required and were not to be given. Especially is this the case where a report is to be circulated to members in advance of the meeting. Although an exceptional personality with a burst of rhetorical fireworks may so dazzle a committee that it approves his proposals before being released from his spell, and therefore finds a written report unnecessary, most of us would be wiser to pin our faith on documents prepared quietly in our own offices than on the mood of the moment 'in committee'.

And after the committee is over, what then? Then of course the trouble really starts, if one has not been on the alert whilst it has been in session. Did they agree on this? What was their decision on that? Which alternative did they finally accept? These are the dilemmas with which one is bound to be faced if no proper minutes have been kept of the committee proceedings. Those of us who work for local authorities know we can rely on the committee clerks who expertly record the final decisions, but such expert secretaries are not always available, and architects who are unsure of the quality of the recording machinery at any committee they are asked to attend would always be well advised to have a colleague with them to make notes of the decisions taken and the instructions given by the committee; thus leaving one free to concentrate on the presentation, not bothered simultaneously by the secretarial side.

Basically, there are three methods of recording committee proceedings. The first is to attempt to record everything of the slightest importance which anybody at all said during the proceedings. This is hopeless unless one has a tape recorder or a skilled shorthand writer! In any case much of the material will be useless and a lot of it probably better forgotten. The second method is to record decisions and instructions only. The third is a compromise between the two extremes. Again from experience I find that the simple recording of the decisions and instructions is by far the most satisfactory arrangement. Somehow, with experience, one finds that these bare bones serve to jog one's memory much more effectively as to what actually took place than would a woolly and verbose account of the whole proceedings.

What, then, does all this add up to? If we attempt to summarise we may précis the foregoing paragraphs as follows:—

1. Weigh up what a committee is for.

2. Find out what type it is and how it is made up and then consider and determine the best methods of presenting your material, and prepare it accordingly. Consider simultaneously what questions you are likely to be asked and, if possible, deal with them in advance in your report.

3. Make sure that a proper record is kept of the decisions and instructions which the Committee gives to you.

Is there anything more I can add? One final word; for goodness' sake speak loudly and clearly when appearing before a committee.

And when you have done all that—keep your fingers crossed, for there is one thing on which you can bet your bottom dollar; it is that whatever you expect to happen won't happen. Expect the unexpected and you won't be far wrong; for I end as I began, 'there's nowt so queer as folk "in committee" '!

Practice Notes

Edited by Charles Woodward [*A*]

IN PARLIAMENT. Ordnance Surveys (Methods). Sir J. Barlow asked the Minister of Agriculture, Fisheries and Food what new methods have been adopted by the Ordnance Survey Department in the production of maps; and to what extent they are leading to increased productivity. Mr. Amory: New materials and processes introduced for survey work have included the use of stable materials for the large-scale field surveys; the plotting of control points on the field documents by co-ordinatograph; and the use of rapid traversing equipment for minor control surveys. Self-reducing tacheometers for large-scale surveys are being gradually introduced in place of chain survey methods; precise three-dimensional plotting machines are being increasingly used for air surveys; the ACE-computer at the National Physical Laboratory is being used for aerial triangulation work; and punched card equipment for the computations of traversing and tertiary levelling. I understand that these new methods and equipment have caused output to rise by from 20 to 50 per cent.

The most important change on the drawings and reproduction side has been the use of zinc glass and plastics as a drawing medium instead of paper. New photographic techniques have also been developed. Increased output has followed from these new methods too, and also improved production. (5 November 1956.)

MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Construction of Housing Estate Roads. Circular 60/56 dated 15 November refers to the use of granular base and sub-base materials and calls attention to Road Note No. 20 which deals with these materials. The Road Note is not in itself a specification but comprises advice and recommendations for preparing specifications.

Road Note No. 20 has been issued by the Road Research Laboratory and may be obtained from H.M. Stationery Office, price 1*s.* net. Road Notes No. 15 and 19 in the same series are also obtainable, price 9*d.* each net.

NATIONAL BUILDINGS RECORD. The Annual Report of the National Buildings Record up to April 1956 has now been published.

Several buildings have been measured during the year and drawings of several other buildings have been given to the Record.

Four thousand and sixty-four photographic negatives of churches, chiefly in Kent, have been received, together with 4,500 negatives of buildings in London and the Home Counties. The Record has acquired 2,500 negatives of mediaeval ecclesiastical architecture, and has completed negotiations for the acquisition of several thousand large negatives of country

houses made by the firm of Mr. Bedford Lemere in the quarter of a century or so preceding the First World War.

The Record has some 7,000 items in its lantern slide collection and a total of 464,287 items in its collection consisting of photographs (or negatives) and measured drawings. The Treasury has increased its grant to £15,000.

The address of the National Buildings Record is 31 Chester Terrace, Regents Park, London, N.W.1 (WELbeck 0619).

COPYRIGHT ACT 1956. This Act has now received the Royal Assent but it has not yet come into force and will only come into force when the Board of Trade appoints a day. Until then the present Act of 1911 will remain in force. As far as architects are concerned there is very little change of principle in the Act.

Possibly the most important of the changes in the law which have been made as a result of this Act is that after it has come into force copyright in a building will not be infringed by an architect who rebuilds premises in accordance with the original design; and where the original building was constructed from drawings without infringement of copyright a reconstruction by reference to those drawings will not constitute an infringement of the copyright in those drawings. This would apply in cases of rebuilding war-damaged premises or rebuilding premises damaged by fire.

Under the Act of 1911 any assignment of, or grant of an interest in, copyright by the first owner thereof could not vest in the assignee or grantee any rights with respect to the copyright after the expiration of 25 years from the death of the author. No matter what the assignor said, the reversionary interest in the 25 years outstanding formed part of his estate. In the 1956 Act there is no restriction on assignments or grants of any interests in copyright.

For copyright to exist in a building it was necessary for the building to have artistic character and the protection afforded by the 1911 Act was to apply to character alone. The 1956 Act omits reference to the necessity for artistic character.

REPRODUCTION OF ORDNANCE SURVEY MAPS. The Ordnance Survey Office have announced that the annual copyright fee payable in respect of reproductions made by members in their own offices from ordnance survey maps are to be increased as from 1 January 1957. The revised fees will be applicable to all licences renewed on or after that date but those licences at present current will remain valid until the date of expiry.

The terms of the new licences will be as follows:—

1. The licence holder is permitted to make up to 20 copies of any one extract.

2. The size of any one extract shall not exceed 500 sq. in.

3. The reproductions shall be made in the licensee's own office and shall be used only for his own official and business purposes. They shall not be freely distributed or sold to the public. (Any reproductions undertaken on the licensee's behalf by reproducing firms are not covered by this licence and will be subject to normal royalties.)

4. Each reproduction must contain an acknowledgement of its source and be stamped clearly 'Crown Copyright Reserved'.

5. The annual fees payable shall be 7*s.* 6*d.* (for hand tracing) or 15*s.* 0*d.* (hand tracing and mechanical reproductions) per partner, director or office, whichever is the greater number.

6. Facsimile reproductions of complete unamended ordnance survey sheets to the same scale and to the same sheet lines are not permitted.

Licences which were renewed in 1956 for more than one year (i.e. to include 1957 onwards), under which reproductions are restricted to 200 sq. in., can be extended to provide for reproductions of up to 500 sq. in. for 1957 onwards on payment of the difference between the old and new fees.

The restoration of the old limiting area of 500 sq. in. does not permit facsimile copies of ordnance survey maps to be made on the same scale and the same sheet lines, as stated in 6 above. Furthermore, where a licence holder wishes to exceed the permitted area of reproduction (500 sq. in.), or to make more than 20 copies of a reproduction, separate application must be made to this office for the assessment of the appropriate copyright fee which will be payable in addition to the compounded fees covered by this letter.

Communications in respect of licences should be made to the Director General of the Ordnance Survey, Leatherhead Road, Chessington, Surrey.

ELECTRICAL INSTALLATION CONTRACTING. The National Register of Electrical Installation Contractors is going into voluntary liquidation at the end of this year, and will cease to function thereafter. An enlarged organisation known as the National Inspection Council for Electrical Installation Contracting has been formed and will take over the objects and functions of the National Register with effect from 1 January 1957.

The National Inspection Council will maintain a Roll of Approved Electrical Installation Contractors. Certificate holders of the National Register, members of the Electrical Contractors Association (Inc.) and the Electrical Contractors Association of Scotland and area electricity boards in respect of the Contracting Departments are being admitted to the Roll of the National Inspection Council without initial inspection. This will provide a Roll of some 3,000 to 4,000 approved contractors in the first instance. Future admissions to the Roll will be by the approval of the National Inspection Board after full investigation based on the report of one of their inspectors. Broadly the qualifications required of an applicant are that he should have had such technical training and practical experience as will ensure that installation work of a safe and proper standard will be carried out, and also that he possess suitable equipment and be of sound business status. The Council's force of inspectors will carry out periodical inspections of the work of approved contractors in order to ensure that the contractors maintain their standard of workmanship in accordance with the rules laid down by the Council. The rules specify maintenance of a standard comparable to that required by the 13th Edition of the I.E.E. Wiring Regulations for the Electrical Equipment of Buildings.

It is believed that in invitations to tender the requirement is often included in regard to electrical installation work that tenderers shall be certificate holders of the National Register. It should be noted that with effect from 1 January 1957 any such requirement should refer to electrical installation contractors being 'enrolled in the Roll of Approved Electrical Installation Contractors of the National Inspection Council for Electrical Installation Contracting'.

Any further information concerning the National Inspection Council may be obtained from the Chief Executive Officer and Secretary, Brigadier W. G. S. Thompson, O.B.E., at their offices at 13 Victoria Street, London, S.W.1.

LAW CASE

Massey Estates Ltd. v. War Damage Commission. Making good war damage, cost of auxiliary work. This case was an appeal from a decision of the War Damage Commission excluding payment for the cost of works executed to the flank walls of the appellants' property, the front wall having been war-damaged and rebuilt and the cost allowed by the Commission. The case was heard in the Chancery Division of the High Court on 31 October, and was reported in THE TIMES for 1 November.

When the work to the front wall of the premises was begun the district surveyor decided that the flank walls (party walls) were not in a fit condition for bonding the front wall to them, and required those walls to be rebuilt. He had declared that the pulling down of one of the party walls became part of the work required to be done to the front wall. The condition of the other party wall was not so serious.

In allowing the appeal his Lordship said that the law as he understood it was that as a general rule work which had to be done before the war damage could be made good was work for which the proper cost could be claimed as part of the war damage itself. This principle was one that had to be applied on commonsense lines and could not be used to warrant the expenditure of a very large sum of money to prepare the way for the making good of the war damage property so-called at a comparatively trifling cost. In this case the amount allowed by the Commission was £3,600, whereas the amount claimed was £7,800.

The work which had been done in the present case was done by reason of the

provisions of the London Building Acts, the relevant bye-laws and the requirements of the district surveyor and so far as his Lordship could see it could not have been done otherwise nor more cheaply without infringing the London Building Acts. He therefore held that the cost of conforming to the district surveyor's requirements did form part of the proper cost of the war damage to the appellants' premises and accordingly allowed the appeal with costs against the War Damage Commission. (THE ESTATES GAZETTE, 10 November 1956.)

(*Note.* Reference was made in the Judgment to the case of Jarvis *v.* War Damage Commission noted in the R.I.B.A. JOURNAL for March 1953 at p. 200, and to the case of Brigadier D. A. S. Browne *v.* War Damage Commission which was noted in the R.I.B.A. JOURNALS for January and May 1947 at pp. 149 and 387 respectively.)

Modular Co-ordination

By R. T. Walters [*A*]

THE ORIGINS of this remarkable book[1] require some explanation. O.E.E.C. is the Organisation for European Economic Co-operation. E.P.A. is one of its branches, set up to stimulate production and thereby to raise the standard of European living. Project No. 174 is the study of modular co-ordination in building, started in November 1953, with eleven countries taking part. *Phase One* of the project was to collect views and experience from each country and to develop a theory of modular co-ordination. This report marks the end of Phase One and is a summary of eleven separate national reports.

With such a background, the report might well have been cautious and difficult to read. Happily it is concise, well illustrated, easy to understand and quite definite in what it says, thanks mainly to the efforts of the B.S.I. team, under Bruce Martin [*A*], which is acting as the technical secretariat for the project.

The first section of the report is devoted to the clarification of ideas. To avoid misunderstandings, the terms used in discussion should have definite meanings. Also their equivalents in different languages should have the same meaning. A provisional glossary has therefore been prepared with 73 terms in nine languages and a description of each term in English.

The report describes the use of reference grids in building and examines the concept of size. This leads to the conclusion that, in order to be able to select sizes, it is first necessary to adopt a systematic series of numbers. These numbers must be multiplied by a unit of measure, the module, which is a common denominator of the majority of existing sizes.

Then follows a fascinating description of the series of numbers which have been suggested by Germany, Italy, the United Kingdom, Greece, the Netherlands and France (the Modulor). The United Kingdom series was prepared by the B.R.S. team, under William Allen [*A*], and has previously been published. Undaunted by six different proposals, the report says they 'may be conveniently summarised in a single group of numbers', and proceeds to describe a seventh series. This is not quite the same as any of the others but is very close to the B.R.S. proposal. If this number pattern is really acceptable to all the participating countries it is a major achievement in itself.

The first section of the report concludes with a carefully reasoned statement on the choice of the module. It appears that five countries have already standardised their module at one decimetre, but, the report says, 'it is clear from the national reports that there is conflict between the one decimetre module and the existing brick sizes, and that this conflict has so far been unresolved'. Germany is using a system of preferred sizes based on bricks and blocks. Denmark has carefully examined the use of a one decimetre module in relation to brickwork and has been unable to come to any conclusion. With admirable fairness, the report sets out the conflicting points of view and then says 'the actual size of the module chosen by the participating countries for practical trials is one decimetre, or four inches in foot-inch countries, although it is recognised that local needs and conditions may demand a flexible interpretation of this agreement'.

The words 'local needs and conditions' imply something more than just a choice between bricks and other materials. They recognise the fact that industrialised building and traditional building are different, and have different needs.

Industrialised building means making more components in factories and using more horse-power per man on the site. It seeks to apply modern production and work-study techniques to the manufacture and assembly of an end product which is seldom the same twice. It needs modular co-ordination in order to obtain the maximum variety of possible assemblies with the minimum number of component sizes.

The report goes into some detail to show that there is an evolutionary trend towards industrialisation in building, and suggests that this is the main reason for having modular co-ordination at all. To summarise the argument, modular co-ordination is essential to industrialisation, industrialisation is essential to higher productivity, and higher productivity is essential to higher living standards. The report does not actually say so, but it gives the impression that a 1 decimetre/4-in. module would be generally acceptable if industrialised building were the only kind which had to be considered. This raises the interesting question of how far the trend towards industrialisation will go. It is unlikely that industrialised building will ever replace traditional building altogether, and probably they will both exist side by side, and in various combinations, for many years to come. It therefore seems that the choice is between applying modular co-ordination to industrialised building only, and finding some way of applying it to both industrialised and traditional building.

If modular co-ordination were applied to industrialised building only, part of the industry might not accept it, and it might fail to achieve its purpose through lack of popular appeal. On the other hand, no one has yet been able to relate the 1 decimetre/4-in. module effectively to the optimum sizes of bricks and blocks. This does not necessarily mean that it cannot be done, and it may be that some compromise between the two alternatives is possible.

Phase Two of the E.P.A. project consists of the design and erection of buildings by the eleven participating countries, in which the ideas contained in the report will be put to the test. It will be a critical period because there is not too much time. Traditional building has managed without modular co-ordination for centuries, but industrialised building cannot afford to wait long for a decision. It is therefore to be hoped that Phase Two will not be concluded without the general adoption of a common module by all the participating countries.

The second section of the report deals with the manufacture of building components. It includes the 'Table for the Co-ordination of Building Materials' which was prepared by the B.S.I. team in the early stages of Phase One. This is a sort of 'life cycle' in which materials pass from their raw state to their final form in the finished building. The table uses the term 'components' for those parts of buildings which are mostly made in factories, and thereby become independent products, complete in themselves.

Among the data collected by the participating countries were lists of the sizes of selected components now being produced. These are summarised in graph form. The next step was to define a 'modular' component and to describe its characteristics. Bringing these two lines of thought together, the report suggests the principles on which the manufacturer might choose the sizes of a range of modular components. Any range of sizes is shown to require the three attributes of simplification, additivity and interchangeability. The diagrams make the meaning clear. From this analysis a method is emerging which will give manufacturers the practical guidance which they so much need.

The second section of the report also contains a vital study of tolerances, based largely on the conventions already used in engineering. This was fully described in

[1] *Modular Co-ordination in Building.* First report on E.P.A. Project No. 174, published by the European Productivity Agency of O.E.E.C. 168 pp. 1956. H.M.S.O. 9*s*.

Bruce Martin's paper to the Modular Society, published in the November issue of the R.I.B.A. JOURNAL.

The third and final section of the report brings modular co-ordination to the site and discusses the position of the modular grid in relation to the various elements in a building.

Further study in Phase Two, outlined in the Summary, includes the detailed investigation of joints in all the participating countries. It is also hoped to produce more data on the interchangeability of components for the use of designers and to complete the method for guiding manufacturers in the choice of a range of sizes before going into production. Perhaps thought might also be given to the phenomenon of 'closed systems' and the economic conditions under which they might be expected to give way to a fully interchangeable system of components.

The names of the working groups in all the participating countries are given in the report together with lists of interested organisations and individuals. All concerned are to be congratulated on their excellent work. The report is a most important, interesting and lively document and it should be widely read by architects and by the whole of the building industry.

It has been said of Ferdinand de Lesseps that 'it was his genius to condense ideas into reality'. Modular co-ordination has been an idea for a very long time. Given real understanding of the issues involved, a great deal of hard work, and perhaps a touch of genius, it can now become a reality.

Book Reviews

Furniture Making in 17th and 18th Century England: an outline for collectors. By *R. W. Symonds*. 14 in. xiv + 238 pp. text illus. The Connoisseur. 1955. £8 8*s*.

Collectors will doubtless find this book extremely valuable, but it will also be of great interest to anyone concerned with designing or making furniture. It contains information about the history of the trade practices of the joiner, cabinet-maker, chair-maker, carver and gilder; describes in detail many special points of construction and cost, such as the evolution of drawers, and the price of veneers in 1776—6d. to 7*s*. 6*d*. per foot! There is a chapter on the ingenious methods of fakers and the no less ingenious methods of detecting fakes; another on clocks of the best make, in which, besides much information about their movements, there are described the special (and odd) constructional methods used by the clockcase makers; and there is a chapter on the surface quality of old furniture—the importance of which is rightly emphasised—which ought to give designers and makers of our own day something to think about. We could do as well in the matter of finish as ever the old makers did, and more easily.

There are over three hundred and fifty good photographs of furniture dating from the fifteenth to the early nineteenth centuries, among which are some few pieces which will be of interest to designers as well as to collectors.

The book contains (in the chapter on 'Woods and Fashions' and elsewhere) statements on some home-grown woods seeking to explain that since the Middle Ages much English furniture has been made of imported woods. For instance, 'very little home-grown timber was satisfactory for furniture'. 'English oak . . . had too coarse a texture for panelling or for good furniture.' 'English walnut was also unsatisfactory. Its defective growth made it a poor constructional wood for chairs and tables. As a veneer it was of a pale colour without any notable grain, and only old trees of this species, as Evelyn observed, could produce wood of fine figure.' 'Solid yew furniture is uncommon, which shows that there was no continuous supply of the wood in logs of sufficient scantling.'

These, like all generalisations about home-grown (and much other) wood cannot be true, unless the quality of it has markedly improved in the last two or three hundred years; and this is hardly probable. You cannot generalise about it. Its quality is too varied, and in that must surely lie the reason why imported woods were preferred. If wood is to be exportable, it must to some extent be selected and of steady quality. Really good English oak and walnut are not very uncommon now and cannot have been so in the past, but really bad trees of the same kinds are not uncommon either. If you are working with no power but that of your body, it is extremely important to avoid wasting time and effort on stuff which turns out badly. Moreover, if you make a few pieces of excellent wood and cannot afterwards maintain the same quality when you repeat them, your reputation suffers. Yew tree is a case in point. The size of the log has little bearing on what you get out of it. With this most beautiful wood you never know that you are safe until you have taken off the last shaving. It has the most devilish facility for concealing without trace blind shakes, galls, dead knots, and in some cases ironmongery within it. It (and its sapwood) can be bone hard or as soft as deal—and quite similar to deal in appearance.

One, and perhaps the principal, advantange of the mahoganies from the Caribbean countries is not mentioned, namely that they generally stand so well. You could saw a log of Cuban through and through, and still make, apparently of any board in it, an unsupported table leaf which stayed flat or very near it. It is a superb wood, and its quality is properly emphasised in this book.

DAVID W. PYE [*A*]

Studies in Architectural History. *William A. Singleton*, ed. (*York Institute of Architectural Study*.) Vol. ii. 8½ in. 143 pp. incl. pls. and other illus. Lond. and York: St. Anthony's Press. 1956. 17*s*. 6*d*.

The first volume in this series was published in 1954 and reviewed in the JOURNAL of March 1955, p. 213. In this one there are seven essays; this time none of them is of immediately local relevance apart from one on Westmorland vernacular domestic architecture. There is a useful series on phases of late 18th and early 19th-century architecture represented by typical north-country architects who practised in them: the early Greek revival in the late 18th, by James Wyatt; the early Gothic revival in the same period, by John Carr; the 'Norman revival' early in the next century, by Thomas Hopper; the later classicism of the first two-thirds of that century, by James P. Pritchett of York. Two of the studies are not at all local: one on mediaeval church wall paintings (a welcome treatise on 'a neglected heritage'); and one outside the country, on the Byzantine heritage. Some are illustrated by photographs and some by drawings, or both. The essays are not arranged in any order, but form a useful group of isolated studies.

H. V. M. R.

The Stones of Manchester, by *Cecil Stewart*. 9¾ in. 144 pp. incl. pls. and other illus. Arnold. 1956. £2.

The Architecture of Manchester. An index of the principal buildings and their architects 1800–1900, compiled by *Cecil Stewart*. (Manchester Libraries Committee.) 9½ in. × 7½ in. 58 pp. Manchester: Central Library. 1956. 8*s*. 6*d*.

Works on Manchester architecture have been few: there are the late Sir Charles Reilly's *Manchester Streets and their Buildings* (1924) and, covering all periods, an unpublished MS. in the R.I.B.A. Library. *The Stones of Manchester* starts at the beginning of the 19th century, with only a passing reference to the late 18th and almost ignoring earlier buildings like the Cathedral, Chetham's Hospital, Wellington Inn, and St. Ann's Church. Its four chapters are chronological: 'Antecedents' (*c*. 1800–38), 'Ascendant' (1839–59), 'Somewhat semi-Gothic' (1859–79), and 'Fin-de-siècle' (1880–1903); the work thus chiefly deals with the Victorian era, but, as such, is full of good and largely new material on buildings, notable for their date, which long deserved publicity.

Among other achievements, the Free Trade Hall is described as, with one possible exception, 'Manchester's finest public building'; the author disagrees with Professor Reilly's comparison with the Basilica at Vicenza and suggests the Gran Guardia Vecchia at Verona as a likelier prototype; the reviewer has thought the Ospedale Maggiore, Milan, or the Palazzo Bevilacqua, Verona, to be closer analogies. The ingenious interior reconstruction (1939–41), preserving the façades, might have been mentioned. An unfamiliar ink drawing of Bodley's St. Augustine's, Pendlebury, brings out its beauties afresh,

and the quoted date, 1870, puts it still earlier in the pioneering sequence of that decade; R. H. Carpenter's lofty interior of his new Cathedral design (1876) is breath-taking; another ink drawing, that of Leonard Stokes's Miles Platting church (1890), gives one a fresh pang of regret that that majestic interior was never realised. Again, Paley and Austin's St. George's, Stockport, was a fresh interpretation of gothic; and Edgar Wood's unique Christian Science church, Victoria Park (1903), fitly concludes the survey.

The work is well illustrated with reproductions of photographs and drawings. There are a good directory of public buildings with a rather small and impressionistic key map, a bibliography, and an index of buildings and persons, from which however several items are omitted. The work is an excellently produced summary of information on a too little appreciated city.

The *Architecture*, a more statistical work, covering roughly the same period, usefully supplements *The Stones of Manchester*; the first and larger part is alphabetical by types of buildings and individual buildings or streets, the second by architects with their works; both have bibliographical references and give dates, though these are only of foundation (and presumably of design). The lists seem astonishingly full.

H. V. M. R.

Egypt: Architecture-Sculpture-Painting, by *K. Lange* and *M. Hirmer*. 12 in. vii + 361 pp. + 244 pls. The Phaidon Press. 1956. £2 10*s*.

It has become almost unnecessary to say that a Phaidon book on art is excellently produced and intelligently presented; this volume is no exception. There are three parts: the first is a general and very lively survey of the whole scene of Egyptian history, then the bulk of the book is taken up with photographs, a few of which are in colour; finally there are notes and diagrams.

This arrangement is a good one; it caters for the casual reader and student alike, and it is simple to choose one's level of reading. There is rightly an emphasis on architecture, and all art is seen in its relationship to it; wide views are followed by closer ones and then by details, and for further information there are the analysis notes and diagrams referring to each plate.

M. D. BEASLEY [*A*]

Municipality of Basrah; Survey and plan. Written and published by *Max Lock and Partners*. 7¼ in. × 9½ in. 78 pp. incl. illus. 1956. £2 2*s*.

Other than Dr. H. V. Lanchester's pioneer study of Zanzibar (1923), there have been few, if any, published town planning reports relating to the Middle East and Arab world. Mr. Max Lock's Survey and Planning Report for the Basrah Municipality is therefore to be welcomed. Like Lanchester, Max Lock has been influenced by the methods of 'civic surgery' used first by Patrick Geddes in India. It is interesting to compare Lock's sketches of a post-Festival water-front for Basrah with Lanchester's earlier proposals for Zanzibar sea-front 'after New Delhi'. Both make one question the wisdom of including architectural projects in reports of this character.

The Report concerns itself with two of the three communities of modern Basrah—old Basrah, dating from Turkish times, and Ashar, the river port—which have, with outlying communities, a present population of some 144,000. It excludes the more modern port area of Margil, owned and administered by the port authority, within which lies Basrah airport. The Report takes the form of an introductory survey and proposals for the development of the two communities. Problems of implementation and financing of new development are not examined in detail. It is illustrated by sketches and photographs, and a 1: 12500 Master Plan for the Municipality of Basrah, 1956–76.

G. A. ATKINSON [*A*]

Dartmoor. Building in the National Park. A booklet compiled by the *Dartmoor N.P. Planning Committee*. 5½ in. 64 pp. Text. Illus. Architectural Press. 1955. 5*s*.

Devon County Council are to be congratulated on sponsoring this booklet, which ought to be read by those about to build (not only on Dartmoor) and which sets an example that might well be followed in other parts of Britain.

Old Dartmoor houses are generally well sited, often in hollows or among trees, and *not* on the sky-line. They look as if they 'belong', because their design emphasises the horizontal line, the simple lay-out, the appropriate material.

Elementary 'do's and dont's' for designers of new buildings are derived from this analysis, and they are illustrated (there is even a chart of colours, from 'Moorland Buff' to 'Trowlsworthy Granite'). So now it is up to the developers and the local planning authority between them.

Stadtplanung Wien. Bericht an den Gemeinderat etc., by *Karl H. Brunner*. (*Vienna: Stadtbauamt.*) 13½ in. x + 225 pp. incl. illus. Vienna, Verlag fur Jugend und Volk. 1952.

Vienna's desecration saddened many hearts, and there are those who have not dared to return for fear of shattering their memories. But like other holocausts it has offered a chance for improvements. Now that the Staatsoper, the Stefanskirche and the Kärntnerstrasse are more or less restored, attention can be given to wider town planning proposals.

Dr. Brunner examines the problem in all its aspects: traffic, green space, siting of industry, and the rest. He seems especially interested in transport, to which he devotes much more space than to, say, housing; he wants new railway stations but, apparently, no shopping centres, and he doesn't propose to abolish the trams.

It will be seen from this that Dr. Brunner is not the man to commit any 'outrage' in Vienna; indeed he has a sharp eye for subtopian manifestations (p. 199). His one extravagance, a small skyscraper, cannot be realised because of the unsuitable Viennese subsoil.

This account of his proposals is fully illustrated with maps and photos.

M. W.

Schulen im Grün, by *Gerda Gollwitzer*. 10¼ in. 90 pp. text illus. Munich: Georg D. W. Callwey. 1956. 9.80 DM.

Thirty post-war schools in Germany, Switzerland and Scandinavia are here briefly described and illustrated. Of many types and sizes, they have one thing in common—landscape architects were employed to make the best use of the land on which each school is sited. This small but attractive and practical book is planned as the first of a series sponsored by the German Society 'für Gartenkunst und Landschaftspflege'. A quartet of introductions is provided by an architect, a landscape architect, a doctor and a schoolmaster.

J. C. P.

French Architecture, by *Pierre Lavedan*. English trans. (Pelican books *series*, A329). 7 in. 304 pp. and 64 pp. of illus. Harmondsworth: Penguin Books. 1944 (1956) 5*s*.

Many British architects will be familiar with a valuable little handbook on French architecture published by Larousse, which has gone through untold editions. Inevitably selective in its contents, but essentially sound and authoritative, as well as convenient in size for the traveller, it tells the whole story from the Middle Ages to the Palais de Chaillot (Ronchamp is of course too recent to be mentioned!), striking a nice balance between structural considerations and aesthetics.

An English translation is a surprise, but most welcome. It is better indexed than the French original—a useful point.

J. C. P.

Conditions of Contract and Insurance. A Practical Guide for Contractors, by *George T. N. Hagart*. 7¼ in. 128 pp. Witherby & Co. 1956.

This book explains the problems of insurance as affecting building contractors, and as there is a chapter dealing with insurance under the R.I.B.A. Form of Contract it should be of interest to architects. The author emphasises the need for careful scrutiny of any kind of insurance policy. As there may be many exceptions to the liability of the insurance company, the policy holder may find that he is covered for everything except the actual occurrence giving rise to a claim. This may be of importance in relation to clause 14 (*b*) and 15 (*a*) of the R.I.B.A. Contract. The former clause is only an indemnity against the contractor's negligence, and an insurance under the latter clause may be necessary, having regard to the particular case and the possibility of damage to property.

The book should be of assistance in considering the respective liabilities of parties to a contract.

C. W.

What Wood is That? A guide to the identification of home-grown and imported timbers, by *Alfred Schwankl*. Trans. and ed. by *H. L. Edlin*. Text 7½ in., xv + 164 pp. incl. illus., + x pls., 7¾ in., in case. Thames and Hudson. 1956. £1 5*s*.

A fascinating feature of Dr. Alfred Schwankl's book, now translated into English, is a collection of forty actual samples of important woods from all over the world, which have been chosen from the far larger number described and illustrated in the text.

A Handbook of Hardwoods, by the *Department of Scientific and Industrial Research: Forest Products Research*. 9½ in. v + 269 pp. H.M.S.O. 1956. 17*s*. 6*d*.

This volume is intended to take the place of the hardwood sections of two handbooks: *Homegrown Timbers* (revised 1941) and *Empire Timbers* (revised 1945). A great improvement on its predecessors, containing full descriptions of 151 hardwoods and briefer notes on 64 others, it has been planned to enable the user to select the timber appropriate to his purpose.

Simple Perspective Drawing, by *Arthur R. Brown*. 6 in. × 9½ in. 34 pp. text illus. Crosby Lockwood. 1956. 6*s*.

A brief but useful reprint of a series of articles which appeared in the ILLUSTRATED CARPENTER AND BUILDER, including notes on shadows and reflections. The oblong format with text on one page and drawings on the other is convenient, and so is the spiral binding which lets the book lie flat; but the novice, for whom the book is intended, may wish that the abbreviations had been confined to the diagrams.

Building Site Material. A Practical Guide to Site Procedure, edited by *E. Drury*. 6¾ in. 180 pp. text illus. George Newnes. 1956. 12*s*. 6*d*.

Although intended primarily for clerks of works, this little handbook is edited by an architect who has kept in mind the needs of an architect's site assistant. It includes chapters on site surveys, inspection of work, and the 1948 building regulations, and there is a section on technical data, comprising about a third of the book, for quick reference on the job. M. W.

Building Surveys, by *F. R. Huggins*. 7½ in. 63 pp. Batsford. 1956. 10*s*. 6*d*.

In the preparation of a building survey, as anyone knows who has made one, there is a surprising number of things to remember. Mr. Huggins's book includes a list of the necessary equipment and practical hints on sketching, measuring, plotting, etc., and it will come in useful both as an introduction to the subject, taking no previous knowledge for granted, and as a *vade mecum* which will fit comfortably into the pocket.

Correspondence

GREAT MAYTHAM

The Editor, R.I.B.A. Journal

DEAR SIR,—I have read with interest the letters which have appeared in various papers regarding this house by Sir Edwin Lutyens. The question of its retention must be dismissed, as it is not a 'period' piece, certainly not detailed to the period, being much more coarse and rigid than its prototype, has no interior character or value and even has a heavy staircase, Tudor in character, but above all is planned so that it can be of no use as a private house, school or institution in these days. I maintain that this, therefore, could not be good architecture and certainly not worthy of recording.

The house is miles from any reasonable railway station and in any case could not be cut up into flats or maisonettes.

It does seem to me that the country cannot afford to retain such structures simply because well-known architects built them, and Sir Edwin's name alone is not a sufficient reason. I believe a large Millais painting was sold the other day for a pound or two, but great respect was paid to him in my young days. Since 1830 we have been copying old periods of our domestic architecture and faking steel and concrete structures to look like solid stone-built buildings, but nobody would have thought of putting up a bit of Tudor work in the 18th century.

The time has come to stop such work and I take off my hat to the younger architects who are striving to establish the contemporary architecture of the 20th century. It will come and it will be established.

Yours faithfully,

KENNETH ANNS [*F*]

Editor's Note.—Since we received the above letter the Minister of Housing and Local Government has confirmed a building preservation Order made by the Kent County Council to protect Great Maytham. A letter from the Ministry to the County Council states: 'The Minister has come to the conclusion that while the building is not one of Lutyens' greatest works, nor one of outstanding national importance, it is nevertheless of very considerable merit and with the Gate House forms a most imposing and attractive composition. Moreover, it is in good condition, apart from various minor matters which are certainly repairable, and the scale of the rooms and their height make them, on the whole, suitable for present-day use: indeed, it appears that there has already been an enquiry from a possible user.'

OBITUARY—CHARLES PAGET WADE [*A*]

DEAR SIR,—May I be allowed to supplement and (in one particular) correct the obituary notice of C. Wade[1] who died on 28 June last.

He was an old friend, and colleague of mine in the years 1907–12, when we were assistants with Sir Raymond Unwin, not Sir Edwin Lutyens, when the Hampstead Garden Suburb was being built, Sir Edwin being the *consulting* architect during this period.

Wade's drawing and sketches were delightful and he had a special flair for cottages and village groups in traditional style. His talents as a pen and ink artist were considerable and his illustrations were used in Unwin's *Town Planning and Practice* and in some of Batsford's volumes, including one on Bruges which I well recall.

His was a decidedly picturesque character and he loved old furniture and costumes, of which he had a fine collection, and on occasion enjoyed dressing up in them, to the delight of his friends.

Wade had family associations with the island of St. Kitts in the West Indies, to which he retired a few years ago, after handing over his property in England to the National Trust.

Yours faithfully,

T. ALWYN LLOYD [*F*]

FRANCO-BRITISH UNION OF ARCHITECTS

DEAR SIR,—In the report of the proceedings of this year's Annual General Meeting of the Franco-British Union of Architects, which you kindly published in your issue for July last (p. 395), it is stated that 'it was decided to approach the competent authorities in both countries to obtain recognition of the French diploma in Great Britain and that of "Registered Architects" in France, so that duly qualified architects could exercise their profession in each of the two countries concerned'. This has aroused interest and several enquiries have been received. The proposal is one of considerable difficulty, more particularly in respect of the provisions of the Architects' Registration Acts 1931–38 in the United Kingdom and similar regulations in France. Various alternatives are now being examined by the committees of the Union in Great Britain and in France. A full report will be submitted at the next Annual Meeting of the Union, which will be held in France in May or June next.

Yours faithfully,

H. P. CART DE LAFONTAINE [*F*]
General Secretary, Franco-British Union of Architects

HUNGARIAN ARCHITECTURE

DEAR SIR,—I read with great disappointment in your October issue Ernö Goldfinger's review about Hungarian architecture. Mr. Goldfinger gave a grossly distorted picture, making political framework for the two last decades of Hungarian architecture.

As the Hitlers and the Muscovite practice clearly show, making or judging art and science from the political point of view gives a result of very doubtful value. Describing pre-war Hungarian architecture, I should suppose that Goldfinger does not possess first-hand experience; he slavishly

[1] See p. 47 November JOURNAL.

repeats the well-known Communist slogans regarding the 'semi-fascist Horthy régime' and the blessing of Russian liberators and People's Democratic paradise, which in the last week in the very country showed her true face. Neither Russians nor ideological brainwashing was necessary to convince the Hungarians about the rightness of the 'Progressivity'. As far back as 1913 we could find in Budapest amazingly 'functional' and 'contemporary' buildings of deliberate noble simplicity, which was always a characteristic virtue of Hungarians' architecture in great contrast with her rich and colourful folk art.

The 'neo-baroque' which Goldfinger mentioned as official architecture in fact was restricted to a single architect, G. Waelder, Professor of Greco-Roman architecture, some kind of Hungarian variation of Sir Albert Richardson and Banister Fletcher. He built a few neo-baroque clerical buildings partly as extensions of existing baroque (original) churches.

His design class in the university was virtually empty, no follower except Ernö Foerk with a huge church in Szeged built in some Byzantine-German renaissance mixture. They were isolated and generally regarded as white elephant builders.

If there was any competition for progressivity of significance that was the Swedish Östberg's Stockholm Town Hall which somewhat appealed to the Hungarian's romantic sense. The tower and the arcades echoed for a few years, mostly in public competitions, but only one was built: a beautiful arcade-piazza in Szeged. In complete contradiction to Goldfinger's statements, the official line in the pre-war decade as far as the Government or Budapest municipal buildings, the Hungarian Art Council, Churches Art Advisory Committee were concerned was in overwhelming majority progressive. At the same time architectural education was in the hands of the following professors: Ivan Kotsis, Enotre Kotsis, Tibor Kiss, uncompromising contemporary from the start: Friedrich Györgyi, started as moderate traditional and turned 'progressive': Koesz and the brilliant Kozma dominated the interior and 'private scale' architecture. They were not only accepted and appreciated as eminent architects but as exponents of 'European' and democratic ideas.

Regarding the charge of 'semi-fascism' of the pre-war years, independent and reasonable authors completely oppose Mr. Goldfinger's opinions. For comprehensive analysis of 'fascist' expression see: *The Great Dictionary of Sovietique and People, Democratic Slogans*, Moscow, 1945.

Public opinion, the Government, the Churches, from before 1945 gave the upper hand for the 'progressives'. Arkay's concrete church of Varosmajar was built much before Corbusier's and Matine's similar effort. (Varosmajar destroyed by Russian bombs; Kotsis' church was destroyed by the Russians to give space for the huge Stalin statue, last week demolished.)

In fact the post-war architecture unbrokenly followed the pre-war line; the architect in many cases was the same person.

If Mr. Goldfinger is familiar with the above-mentioned names, and many dozen unmentioned, he himself should know how far he is from the truth.

As far as I know, in the R.I.B.A. Library several copies exist of a pre-war Hungarian architectural review TÉR ÉS FORMA; if you take the trouble to turn their pages the statements of Goldfinger will automatically collapse. Another edition *Uj Magyar Épitészet* (*New Hungarian Architecture*), published in 1938 (about) in Budapest, disperses any doubt if left.

We all know very well that anything which has some value in the development of human culture and civilisation, science or art or philosophy, was created by the Russians, or, if it happened after the Great Soviet Revolution, by a Comrade, and in the People's Democratic countries nothing happened before the blessed 'Liberation'! Seemingly Mr. Goldfinger shares this opinion.

But he being a good architect I strongly hope that he will revise and rethink his statements if he took the trouble to study the above-mentioned publications.

I do not charge him with deliberate distortion or conscious lie, but with a great degree of superficiality and irresponsibility, accepting uncritically the logical and moral pattern of a Communist publication which is by nature at least 50 per cent propaganda.

Yours faithfully,

J. G. BAJO

Mr. Goldfinger's reply to this letter is printed below.—Editor.

DEAR SIR,—I have read Dr. Bajo's lengthy letter addressed to the Editor as well as to me, and must conclude that he either has not read my review or does not understand it. I stated clearly the following facts:—

1. Modern architecture has deep roots in Hungary, and brilliant practitioners—although in common with many other countries these were not officially recognised, and did not get State commissions before the war.

2. The new régime established in 1945 gave a number of progressive architects an opportunity to build a number of remarkable buildings which were illustrated in the book under review.

3. In 1951 the architects received directives (at a congress held that year) which put the clock back. Buildings built *since that year* can *not* be classified as being in the progressive tradition. I also stated that they were reminiscent of official architecture of the semi-fascist régime of the 1920's and 1930's.

These are facts. I last visited Hungary in the 1930's and since that date have been in touch by means of magazines (TÉR ÉS FORMA, etc.) and books and numerous meetings with Hungarian architects at international congresses and privately.

A number of buildings, and mainly the Catholic Church in Városmajar by Arkay, are illustrated in the excellent book *Uj Magyar Epitömüvészet* by Györgyi. I consider this church as having been even at the time a concoction of outmoded clichés, and not worthy to be mentioned as a work of modern architecture as we understand it. Nor would I consider the teachings of those architects mentioned by Dr. Bajo as modern or progressive. In this respect reference can be made to a book by the Royal Hungarian Technical University under the editorship of Dr. Ivan Kotsis, a professor at this University, published in 1944.

My intention was to give a factual review, and not to enter into political controversies as to whether it is correct to state that the pre-war Horthy régime was semi-fascist—as is usual in this country—or otherwise.

I really cannot see where Dr. Bajo attributes to me or to anybody mentioned in my review the statement that all blessings were created by Russians or by a Comrade after the Great Soviet Revolution, and that in the People's Democratic countries nothing happened before the blessed 'Liberation'. Nothing of this sort was mentioned at all in my review.

Yours faithfully,

ERNO GOLDFINGER [*L*]

CHRISTMAS AND THE A.B.S.

SIR,—Now that the present-giving season is here, may I suggest that every principal architect counts the number of new jobs which have come into his office since last Christmas, multiplies that number by his own factor (10/–?, 20/–?, or more?) and sends the proceeds to the Architects' Benevolent Society for the benefit of others less fortunate than himself?

If we could make such presents habitual, the headaches and heartaches of the Architects' Benevolent Society would be considerably reduced.

Yours faithfully,

H. G. C. SPENCELY [*F*

ARCHITECTURE IN NEWSPAPERS

SIR,—A lifelong contact with both encourages me to supplement your admirable article on two points.

(1) The aim of the press (apart from sensation) is to include items likely to attract advertisements. Architects may not advertise; hence their names are unimportant. This accounts for frequent exclusion.

(2) Misdescription is splendidly accounted for in Bernard Shaw's stage direction in 'The Doctor's Dilemma', which I quote from memory:—'Enter the reporter. He is a person who from congenital erroneousness is unfitted for any other occupation than reporting for the Press, who do not have to *act* upon the information they procure, but merely convey it to the idly curious'.

If you have ever had a local event with which you are familiar reported, you have been lucky if it is not astray in some (perhaps important) detail.

Yours sorrowfully,

EDWIN GUNN [*RETD. A*]

Notes and Notices

NOTICES

Special General Meeting, Tuesday 8 January 1957, at 6 p.m. Notice is hereby given that a Special General Meeting of the Royal Institute of British Architects, open only to corporate members, will be held at 6 p.m. on Tuesday 8 January 1957 for the following purpose:—

To consider, and if thought fit, to pass the following Resolution: 'That the existing Leases of Nos. 66 and 68 Portland Place respectively each dated the 3rd day of November 1936 shall be surrendered to the Freeholders, and that the Royal Institute shall in lieu thereof enter into a fresh Lease of Nos. 66 and 68 Portland Place aforesaid in the form of a draft which has been approved on behalf of the Royal Institute AND that the Council be and is hereby authorised to affix the Common Seal of the Royal Institute to the documents, necessary to complete the transactions hereby authorised.'

If this Resolution is duly carried, a further Special General Meeting will be held on Tuesday 5 February 1957, prior to the Ordinary General Meeting on that date, for the purpose of confirming that Resolution in accordance with the provisions of Clause 22 of the Supplemental Charter of 1887.

Third General Meeting, Tuesday 8 January 1957. The Third General Meeting of the Session 1956–57 will be held on Tuesday 8 January 1957 following the Special General Meeting, for the following purposes:—

To read the Minutes of the Second General Meeting held on 11 December 1956; formally to admit new members attending for the first time since their election.

To read the Council's Deed of Award of Prizes and Studentships 1957.

Mr. Reyner Banham, B.A., to read a paper on 'Futurism and Modern Architecture.'

(Light refreshments will be provided before the meeting.)

R.I.B.A. Dinner, Wednesday 27 February 1957. The R.I.B.A. Dinner in 1957 will be held on Wednesday 27 February at the Dorchester Hotel, Park Lane, London, W.1.

The cost of the tickets is £1 15*s.* each, exclusive of wines, cigars, etc.

Evening dress with orders and decorations or uniform will be worn.

A form of application in enclosed with this issue of the JOURNAL, and members are asked to send in their applications at the earliest possible moment, accompanied by the necessary remittance, which must be by crossed cheque or money-order, made payable to the Secretary, R.I.B.A.

British Architects' Conference 1957. The British Architects' Conference 1957 will be held at Oxford from 10 to 13 July at the invitation of the Berks, Bucks and Oxon Architectural Association. Full details of the programme will be published in due course. Particulars of accommodation in hotels and colleges will be published in the January issue of the JOURNAL.

The R.I.B.A. Appointments Department. Members and Students of the R.I.B.A. and the Allied Societies are reminded that the services of the Institute's Appointments Department are available to employers requiring assistants and to assistants seeking salaried employment.

Employers are invited to notify the Secretary of vacancies in their offices, giving details of the work to be done, the qualifications required and salaries offered.

Assistants should preferably call at the offices of the Appointments Department, but if this is not practicable they should obtain from the Secretary an application form, which when completed and returned to the Institute will enable the Department either to send the applicants particulars of vacancies suitable for their qualifications and requirements or submit their names for vacant posts.

Members and Students seeking official appointments should note that normally these are fully advertised in the weekly professional press, and that therefore the Appointments Department do not as a rule notify them to those on the register.

The Institute will also be glad to advise on most matters concerning architectural employment, including overseas appointments.

R.I.B.A. Distinction in Town Planning. The R.I.B.A. Distinction in Town Planning is by conferment only, and is limited to Fellows, Associates and Licentiates of the R.I.B.A.

The Distinction is the highest award in Town and Country Planning that the R.I.B.A. can bestow. It is solely intended for members of the R.I.B.A. who have made an outstanding contribution in the field of large-scale planning. Recommendations are submitted to the Council by a Standing Committee set up for the purpose.

Personal applications by candidates will not be entertained; the name of a candidate must be submitted by three sponsors, themselves members of the R.I.B.A., who will be required to submit the following particulars on behalf of the candidate:

(*a*) Details of professional qualifications and experience;

(*b*) Evidence of his work and experience, such evidence consisting of a list of the candidate's work, together with references to professional journals in which the works have been illustrated; and such other evidence as may assist the Committee in making their recommendation to the Council.

Nominations may be made twice a year on 1 March and 1 November, and should be addressed to the Secretary, Royal Institute of British Architects, 66 Portland Place, London, W.1.

Members upon whom the Distinction has been conferred will be entitled to use the designation 'R.I.B.A. Distinction in Town Planning', and it is advised that this should be used in full, or the initials 'R.I.B.A. Dist.T.P.' after the initials F.R.I.B.A., A.R.I.B.A. or L.R.I.B.A., according to the class of membership to which they belong.

Members and Professional Affixes. The Council's attention has been called more than once to the practice among some members of adding a string of letters of doubtful value to the affix indicating membership of the Royal Institute on their letter paper.

This is a matter in which the Council obviously cannot dictate to members, and must trust to their good sense. It should be obvious, however, that the affix of a chartered body of high standing is weakened in effect by the addition to it of a string of other mysterious designations, some of which probably indicate no more than the payment of an annual subscription.

Shapes and Sizes of Technical Literature. Postcards for use by members asking manufacturers to produce technical literature in accordance with B.S. 1311: 1955 are available from the Secretary, R.I.B.A., on application.

Luncheon and Tea Facilities for Members. Members are reminded that there is a self-service dining room on the second floor of the R.I.B.A. building where luncheons are served between 12 noon and 2 p.m. on weekdays except Saturdays. The dining room is open to members and Students. There is a 'Club' licence and drinks can therefore be obtained with meals. Members may bring guests.

Morning coffee and afternoon teas have hitherto been served in the Members' Room on the first floor. Owing to the rebuilding programme the Members' Room has to be taken over for temporary office use and the service of coffee and teas will, during the period of rebuilding, be available on the second floor landing.

BOARD OF ARCHITECTURAL EDUCATION

Tite Prize and Soane Medallion Competitions, 1957–58. The attention of intending competitors is called to the fact that the closing date for the submission of forms of application for the Tite Prize is 18 January 1957.

The Tite Prize, a certificate and the sum of £100 for the study of the Architecture of the Italian Renaissance, is confined to Probationers and elected Students of the R.I.B.A. and elected Students of Dominion Allied Societies who have passed the R.I.B.A. Intermediate or equivalent examination, or produce certificates from members of the R.I.B.A. to the effect that they have reached the required standard. Students who have passed the R.I.B.A. Final or equivalent examination at the time of the en loge competition are not eligible to compete.

Under arrangements for the competition, only one en loge competition will be held. This will take place in London and at non-metropolitan centres on Tuesday 19 March 1957.

The Soane Medallion and the sum of £120. The competition is confined to members of the R.I.B.A. and of the Allied Societies Overseas and elected Students of the R.I.B.A. and of the Allied Societies Overseas, who have passed the R.I.B.A. Final or equivalent examination or who have produced certificates from members of the R.I.B.A. to the effect that they have reached the required standard. With regard to the R.I.B.A. Final or equivalent examination, Students need not have passed the Professional Practice Examination to be taken after 12 months' practical experience.

The en loge competition for the Soane Medallion will be held on the same day as that for the Tite Prize, i.e. Tuesday 19 March. The closing date for the submission of forms of application is 18 January 1957.

Forms of application for admission to the competitions may be obtained at the R.I.B.A.

COMPETITIONS

Northern Ireland War Memorial Building. The Governors of the Council of the Northern Ireland War Memorial invite architects resident in Great Britain and Northern Ireland to submit designs for a Memorial Hall and offices, to be erected in Belfast, Northern Ireland.

Assessors: Mr. Harold A. Dod, M.A. [*F*], Mr. R. S. Wilshere, M.C., F.R.I.C.S. [*F*].

Premiums: £750, £500, £300.

Last day for submitting designs: 30 March 1957.

Conditions may be obtained from Captain W. H. Wilson, Hon. Secretary, The Council of the Northern Ireland War Memorial, 73 King Street, Belfast.

Deposit: £2 2*s*. 0*d*.

An applicant for the conditions must state his registration number or the number of the receipt issued to him by the Architects' Registration Council in respect of the admission fee.

Proposed Municipal Offices and Civic Hall, Carlisle. The Corporation of the City and County Borough of Carlisle invite architects registered under the Architects (Registration) Acts and resident in Great Britain, Northern Ireland or the Republic of Ireland to submit in competition designs for a new Assembly Hall and Municipal Offices to be erected in Carlisle.

Assessor: Professor W. B. Edwards, M.A., B.Arch., M.T.P.I. [*F*].

PREMIUMS

(*a*) Preliminary Stage. Six competitors will be selected to proceed to final stage. Each will receive the sum of £300. Last day for submitting designs, Thursday 31 January 1957.

(*b*) Final Stage. The author of the design placed first will receive £1,000. Last day for submitting designs, 1 July 1957.

Conditions may be obtained from the Town Clerk, 15 Fisher Street, Carlisle.

Deposit £2 2*s*. 0*d*.

An applicant for the conditions must state his registration number or the number of the receipt issued to him by the Architects' Registration Council in respect of the admission fee.

New Technical College Buildings, Paisley, Scotland. The Governors of the above College invite architects registered under the Architects (Registration) Acts and resident in Great Britain, Northern Ireland or the Republic of Ireland to submit in competition designs for new Technical College buildings in Paisley, Scotland.

Assessor: Professor R. Gardner-Medwin, M.T.P.I. [*F*].

Premiums: £1,500, £1,000, £500.

Last day for submitting designs: Noon on 27 March 1957.

Conditions may be obtained from Messrs. J. and A. Gardner, Clerks to the Governors, 3 County Place, Paisley, Renfrewshire.

Deposit: £2.

An applicant for the conditions must state his registration number or the number of the receipt issued to him by the Architects' Registration Council in respect of the admission fee.

International Competition, Geneva. The Department of Public Works for the Republic and Canton of Geneva are promoting an International Contest of Ideas for the layout of the Place des Nations and the Approach to the Secretariat of the Palais des Nations in Geneva. Assessors: M. Jean Dutoit, Prof. Sir Patrick Abercrombie [*F*], M. Eugène Beaudouin, M. Jacques Carlu, M. Arnold Hoechel, M. Giulio Minoletti, M. Werner Moser. The Assessors will work in consultation with representatives of the European Office of the United Nations, the City of Geneva, the Chief of Police of Geneva, the Secretary General of the Department of Public Works.

Premiums: 40,000 Swiss francs to be awarded to a maximum of 5 entries; 10,000 Swiss francs for the purchase of the premiated entry.

Last day for the despatch of entries: 6 p.m., 15 April 1957.

Conditions may be obtained on application to the Department of Public Works, 6 rue de l'Hôtel de Ville, Geneva.

Deposit: 50 Swiss francs, returnable if an entry is submitted.

The conditions of this competition have been approved by the I.U.A.

International Competition, Memorial to Enrico Fermi, Chicago, U.S.A. The Secretariat of the International Union of Architects have examined the published conditions of this competition and found them to be not in accordance with the standard regulations for International Competitions (R.I.B.A. Kalendar page 840). Member nations of the I.U.A. have accordingly been warned not to participate.

ALLIED SOCIETIES

Changes of Officers and Addresses

The Royal Institute of the Architects of Ireland. Hon. Secretary (as from 1 January), John H. Morgan, Lasswade, Churchtown Road, Dublin.

Royal Australian Institute of Architects. New South Wales Chapter. President, Professor H. Ingham Ashworth [*F*]. Hon. Secretary and Treasurer, G. M. Thorp, M.C. [*A*]. *Tasmanian Chapter.* President, A. W. J. Voss, c/o Hydro Electricity Commission, Elizabeth Street, Hobart, Tasmania. *Western Australian Chapter.* President, M. W. G. Clifton, London House, 214 St. George's Terrace, Perth, Western Australia. *South Australian Institute of Architects.* President, J. C. Irwin, O.B.E., E.D. [*F*].

Bristol and Somerset Society of Architects. Biennial Dinner. The biennial dinner of the Bristol and Somerset Society of Architects was held on Tuesday 27 November 1956, at the Guildhall, Bath, by kind permission of the Mayor, Councillor S. A. Smith, who was among the guests. Also among the guests were Mr. Kenneth M. B. Cross, President R.I.B.A., the Lord Mayor of Bristol, the Chairman of the Somerset County Council, the Town Clerk of Bath, the Archdeacon of Bath, the President of the Law Society (Bristol), local representatives of the chartered surveyors, the building industry and the engineers, and Mr. C. D. Spragg, C.B.E., Secretary R.I.B.A. The President of the Society, Mr. T. W. Snailum [*F*], was in the chair. The toast of the City of Bath was proposed by Mr. Kenneth Nealon [*F*] and the Mayor of Bath replied. Mr. Snailum proposed the toast of the R.I.B.A. and Mr. Cross replied. The toast of the guests was proposed by Mrs. Molly Gerrard [*F*] and the Archdeacon of Bath made reply.

Nottingham, Derby and Lincoln Society of Architects. Annual Dinner. The annual dinner of the Nottingham, Derby and Lincoln Society of Architects was held on 23 November at the Welbeck Hotel, Nottingham. The President of the Society, Mr. S. F. Barrell [*A*], was in the chair and among the guests were Mr. Kenneth M. B. Cross, President R.I.B.A., Mr. D. M. Keegan, M.P. for South Nottingham, the Lord Mayor of Nottingham, the Mayors of Lincoln and Derby, Mr. Norman Hanson, Mr. W. H. Eborn, M.B.E., of The Linen and Woollen Drapers' Institution, and Mr. C. D. Spragg, C.B.E., Secretary R.I.B.A.

Mr. Barrell proposed the toast of the Cities of Nottingham, Derby and Lincoln, Mr. Keegan proposed the toast of the R.I.B.A. and Allied Societies and Mr. Cross replied. Mr. Keegan made an appeal for the building of more flats in Nottingham.

Mr. Cross presented the R.I.B.A. Bronze Medal for Architecture in the Society's area for the three-year period ended 31 December 1955 to Sir Thomas Bennett, K.B.E. [*F*], for the Old People's Home, Leylands Estate, Derby, and a replica to Mr. Eborn. Mr. J. Gordon Woollatt, D.F.C. [*F*], Chairman of the Nottingham Branch of the Society, then proposed the toast of the guests and Mr. Hanson replied.

Wessex Society of Architects Golfing Society. The third annual competition for the Eric Cole cup presented by the President, Lieut.-Colonel Eric Cole, took place at the Knowle Golf Club, Bristol, on Saturday 20 October, the winner being T. S. Singer [*A*]. At the Annual Meeting of the Society which followed, B. Ivor Day [*F*], Captain, was re-elected Captain and also elected Secretary of the Society for the ensuing year.

Next year it is hoped to arrange matches with the R.I.B.A. Golfing Society at Bath, with the Bristol surveyors at Warminster, with the Gloucestershire builders at Cirencester and possibly with the Hampshire and Isle of Wight Architectural Association.

Federation of Malaya Society of Architects. On 15 November the Federation of Malaya Society of Architects held a joint meeting with the Town Planning Institute, Malaya Branch. Local representatives of the Singapore-Malayan Joint Group of the Institutions of Civil, Mechanical, and Electrical Engineers and the R.I.C.S. also attended. Mr. T. A. L. Concannon, F.S.A., M.T.P.I., Vice-President of the Society and Vice-Chairman of the Town Planning Institute, Malaya Branch, and Federal Town Planner for Kuala Lumpur, was in the chair.

Mr. J. E. Jackson, A.M.T.P.I., A.M.I.Mun.E., Planning Officer of the Kuala Lumpur municipality, read a paper on Regional Planning Problems in the Kuala Lumpur district. He traced the history of Kuala Lumpur from its foundation in 1857, when it was no more than a tiny mining hamlet in a jungle swamp, to the present day when it had a population of 300,000 persons within the municipal limits of 23,500 acres. He described the difficulties caused by a large proportion of town land being rich in deposits of tin ore, the working of which had left immense tracts in a derelict state, in addition to equally large areas which were continuing to be mined. He proposed the planned use of worked-out mining land as open spaces for public recreation, acceleration of slum clearance and housing and creation of additional areas for industry. He referred to Petaling Jaya, a 'New Town' planned by the Federal Town Planning Department, and suggested the building of an entirely new and separate Federal capital on a site to the south-west of Kuala Lumpur on undulating land free from economic tin deposits.

GENERAL NOTES

Post-Graduate Awards in Science and Technology. By arrangement with the Ministry of Education and the Treasury, the Department of Scientific and Industrial Research has assumed responsibility for making practically all fresh awards from public funds to post-graduate students in science and technology. The awards will be made for training in research as in the past, but in addition will also be made for courses of advanced instruction.

There will be two types of award for which students having a good Honours degree will be eligible:—

D.S.I. Research Studentships. These will be for post-graduate students seeking two or three years of supervised training in research, leading in most cases to a Doctorate of Philosophy. The qualifications for these awards, formerly called Maintenance Allowances, and the

regulations governing them, are already well known in the universities and colleges of Great Britain.

D.S.I.R. Advanced Course Studentships. This new type of award will be made to select post-graduate students wishing to attend courses of advanced instruction in science and technology. The courses to be included will cover a wide variety of subjects including, for example, soil mechanics and fuel technology. The courses must not be less than six months in length. Awards will normally be made to graduates taking the courses immediately after having received their degrees. It is expected that those who have already taken employment in industry will normally be supported by their employers.

Method of Application. Application for D.S.I.R. Studentships should not be made direct to the Department by students. Students who have recently graduated with honours, or hope shortly to do so, should apply to the Heads of Departments at universities and colleges, to whom information about the Studentships has already been sent. Applications will have to reach the D.S.I.R. from Heads of Departments where students hope to work by 1 March 1957. Selection will be on the recommendation of a Post-graduate Training Grants Committee, drawn largely from the universities.

R.I.B.A. Golfing Society. Annual Dinner. The annual dinner of the Society will be held on 18 January at the Milestone Hotel, Kensington. Applications for tickets should be made to the Secretary, S. H. Statham [*A*], Messrs. Sydney Clough, Son & Partners, Devonshire Close, 39 Devonshire Street, W.1 (LANgham 7101). As is customary, tickets will be issued to members only and for one personal guest.

Obituaries

Frederick Arthur Johnson [*L*] died on 9 June, aged 58.

Mr. Johnson, after studying at the Bartlett School of Architecture and the Slade School of Art, spent two years on the architectural staff of the then London and North-Eastern Railway and subsequently thirty-one years with the London County Council. Here he worked on a number of housing schemes, including the Ocean Estate, Stepney, Clarence Avenue, Clapham, and Poynders Road, Wandsworth.

Thomas Rutter Eltringham, M.V.O., O.B.E. [*Retd. F*] died on 9 July, aged 68.

Mr. Eltringham began his career in the Newcastle upon Tyne district office of H.M. Office of Works in 1911. He was transferred to London in 1929 and retired in 1951, as Assistant Chief Architect, Ministry of Works. The M.V.O., awarded to him in 1951, was largely in recognition of his maintenance work on the royal palaces, particularly Buckingham Palace.

George Pemberton Allen [*Retd. F*] died on 8 July, aged 83.

Mr. Allen served for many years as architect to the firm of W. H. Allen, Sons and Co. Ltd., of Bedford, founded by his father, building them a sports club. He also designed All Saints, St. Leonard's and St. Andrew's churches in the Bedford neighbourhood and, in 1897, Bromham House—now Bromham Hospital.

Mr. Allen was a founder member and former President of the Rotary Club of Bedford and a founder member of the Bedford Old People's Welfare Committee. As a young man he was an outstanding tennis player, and had played at Wimbledon.

Arthur William Whydale [*L*] died on 16 July, at Royston, Hertfordshire, where his father, a retired Methodist minister, had settled forty years earlier.

Among Mr. Whydale's architectural works were alterations to Barnwell Manor, for H.R.H. the Duke of Gloucester, the new children's ward at Kettering Hospital, and a housing scheme for munition workers at Corby. His best-known work however was the designing of the Priory Memorial Gardens, Royston, for which he received a Festival of Britain Award for Merit.

Mr. Whydale was a member of Royston Urban District Council and played a very active part in the town's public life.

Walter Samuel Rumsby [*Retd. L*] died on 30 August, aged 74.

Mr. Rumsby was articled and practised in Bournemouth. Among his works were Hampshire House and Hampshire Court, The Square, Bournemouth, the Friends' Meeting House and the Home for the Blind, Bournemouth, the rebuilding of Bournemouth adult school hall after destruction during the Second World War and the rebuilding of war-damaged properties and conversions of old properties into flats for the Bournemouth Corporation.

John Mortimer Sheppard [*Retd. F*] died on 21 June, aged 72.

After serving his articles Mr. Sheppard worked for a time in the office of the late Frank Verity [*F*], where he was contemporary with Professor Sir Albert Richardson [*F*], P.R.A. He began private practice in 1911 and with the late Carter Pegg won the competition for a new mental colony at Meanwood for Leeds Corporation. Thereafter he specialised in this kind of work, designing Botley's Park, Chertsey, Hill End, Hertfordshire, and the Foundling Hospital Schools, Berkhamsted. In 1932 he joined in partnership with Mr. W. B. Stedman, D.C.M. [*F*], and Mr. Irwin Smith [*F*], and with them was responsible for additions to hospitals at Knowle Park and Park Prewett, Hampshire, and a new hospital at Tatchbury Mount. By 1937, when the firm won the competition for a metal hospital and colony at Ormskirk, Lancashire—the building of which was prevented by the war—Mr. Sheppard was recognised as an authority in this field.

He retired from the firm of J. M. Sheppard and Partners in 1946 owing to ill health.

Gavin Lennox [*F*] died on 30 July, aged 78.

Mr. Lennox practised in Glasgow, beginning in 1906, when he entered into partnership with Mr. Daniel W. MacMath [*F*]. Among the works with which Mr. Lennox was associated were Gartcosh and Bridgend Schools, Lanarkshire, and Balornock School, Glasgow; cinemas in Ayr, Port Glasgow and Glasgow, licensed premises, the bus garage in Helen Street, Glasgow, and private houses in Glasgow and Lanarkshire.

Philip Evans Palmer [*A*] died on 30 June, aged 57.

Mr. Palmer, the son of an architect, studied at the Eastbourne School of Art and then at the Architectural Association School of Architecture. He subsequently spent two years in the office of Mr. Clough Williams-Ellis, M.C. [*F*] and eight with Sir Edward Maufe [*F*]. Among Mr. Palmer's works were offices in Portsmouth, flats in Chelsea, staterooms in the 'Queen Mary', churches, premises for Lloyds Bank Ltd., and country houses, both new and converted. He exhibited in the Royal Academy, the Royal Scottish Academy and the Paris Salon.

Ernest Willson [*A*] died on 18 July, aged 66.

Mr. Willson was architect and Midlands Area Manager for Messrs. Henry Boot & Sons Ltd. and to the National Housing Trust, Ltd., of Sheffield, from 1920 until his death. He was engaged on the erection of a number of houses and estates for Bilston Corporation, the City of Birmingham, the Corporation of Smethwick, the Borough of Sutton Coldfield, Walsall Corporation and Aldridge U.D.C.

Stanley Selwyn [*Retd. L*] died on 7 July, aged 77.

Mr. Selwyn was for a time an assistant in Sir Aston Webb's office, where he worked, among other buildings, on the Royal Naval College, Dartmouth. He then went to the Metropolitan Railway as assistant, where he worked on the erection of Chiltern Court, Baker Street Station. He remained with the London Passenger Transport Board until his retirement in 1941.

Herbert Thompson Sykes [*Retd. L*] died on 22 October 1955, aged 87.

Mr. Sykes' chief works were the mental hospital, Wexford and Limerick, and St. John's Hospital, Limerick.

Harold Thomas Burgess [*L*] died on 30 March, aged 84.

Mr. Burgess was a specialist in public baths, and built them in Coventry, Wood Green and Beckenham.

Homi Framjee Billimoria, O.B.E. [*F*], died on 11 June, aged 54.

Mr. Billimoria, who was Deputy Chief Architect, Public Works Department, Colombo, Ceylon, came to England to qualify at Liverpool University. In 1924 he entered into partnership with Mr. J. F. L. de Silva [*A*]. Among his works were hospitals, cinemas, schools, the Ceylon Independence Celebration Assembly Hall, Jaffna Town Hall, a printing works for the Ceylon Government, churches, temples and mosques, residential buildings and the route decorations for the Queen's visit in 1954.

Robert Kitching Ellison [*Retd. F*] died on 18 March, aged 75.

Mr. Ellison built schools in Huntingdonshire and Bedfordshire and extensions to the nurses' home, Victoria Hospital, Tite Street, and a new nurses' home at St. Mark's Hospital, City Road, London, E.C.1.

George Howard Herring [*F*] died on 18 May, aged 65.

As Consultant Architect to the National Children's Home and Orphanage Mr. Herring designed an Approved School at Congleton, Cheshire, a Senior Mixed School at Edgworth, Lancashire, and a number of small houses at the Princess Alice Orphanage at Birmingham.

He also carried out the reconstruction of Hexton Parish Church, Hertfordshire.

Norman Jones [*F*] died on 17 August, aged 74.

Mr. Jones practised in Southport and Manchester. He was articled to his father, Henry Jones, architect and surveyor, in 1900, began personal practice in 1915 and entered into

partnership with Mr. Leonard Rigby [*F*] in 1931 and with Mr. C. A. Jones [*A*] and Mr. S. C. Jones [*A*] in 1944 and 1950 respectively. Mr. Rigby writes:

'Mr. Jones's early work included domestic and industrial projects, and he made many measured drawings of old Lancashire church details for a well-known local antiquarian. He also carried out a considerable amount of hospital work, such as new wards and extensions to Southport Infirmary, and a nurses' home; extensions to the Southport Convalescent Home and the Bradstock Lockett Homes for Crippled Children. Later he was engaged in the building of chain stores in the principal towns of the North and Midlands of England, in the planning of which he had an extensive and specialised knowledge.

'He had a wide circle of friends both inside and outside the profession.'

Mr. Jones was a Past Master of Scarisbrick Masonic Lodge No. 2295 and held the degree of Past Provincial Grand Deacon in the West Lancashire area.

Albert John Toomer [*Retd. F*], County Architect of Somerset 1922–38, died on 24 July, aged 84.

Mr. Toomer was with the War Office in York until 1914, served with the R.E. (rising to the rank of Major) and R.F.C. in the First World War and joined the Somerset County Council in 1919. Among the works for which as County Architect he was responsible were the county school at Weston-super-Mare, police headquarters and courts at Weston-super-Mare and Yeovil, and schools, police stations and police housing and public health buildings throughout the county.

Harold Overall Samson [*Retd. L*] died on 4 September, aged 83.

Mr. Samson practised in Bridgwater and Taunton. He designed additions to Taunton School and to Queen's College, Taunton, and a number of commercial and domestic buildings in the district.

Adam Legge Johnston, F.R.I.C.S. [*L*], died on 19 September, aged 75.

Mr. Johnston practised in Kirkcaldy, Fife, starting in practice in 1920 in partnership with Mr. D. Forbes Smith [*A*]. He was joined in 1952 by Mr. J. A. Harris, A.R.I.C.S., and Mr. A. Moyes [*A*]. He had a long connection with co-operative societies—he was architect for 35 years to the Dysart Co-operative Society and for 25 years to Montrose Co-operative Society. In addition he specialised in the design of model bakeries and his work in this field can be seen in Alva, Dysart, Kirkcaldy, Inverness, Montrose, Blairgowrie and a number of other Scottish towns. He also carried out work on Strathore Hospital, Thornton, the Masonic Hall, Kirkcaldy, and designed a large carpet factory in Dysart and a block of shops and houses in Normand Road in that town.

Reginald Latham Luke [*A*] died on 17 July, aged 58.

Mr. Luke studied at the Bartlett School of Architecture, London University, and was elected an Associate in 1922. For three years he was on the architectural staff of the Imperial War Graves Commission in France, then with Messrs. Schmidt Oarden and Erikson in Chicago as assistant. He returned to London and after another year or two as assistant with Frank Verity [*F*], opened his own office in Portland Place, carrying on a practice mainly domestic in character. In 1935 however he gave this up and joined the Works Directorate of the Air Ministry. Here he was responsible for the planning of a number of R.A.F. airfields and depots at home and abroad and in 1949 he designed and supervised the erection of the wrought iron memorial gates at the R.C.A.F. Station at Trenton, Ontario, presented to the Canadian Government to commemorate the British Commonwealth Air Training Plan by the Governments of the United Kingdom, Australia and New Zealand.

Thomas Reginald John Meakin [*L*], a founder member of the Coventry Society of Architects, died on 26 February, aged 81.

Mr. Meakin was articled to the late T. E. Tickner [*F*] and afterwards studied at Liverpool School of Architecture. He began private practice in 1903. His principal works were the Standard and Rover Company shadow factories for the Ministry of Aircraft production, schools for the local authority, licensed premises for various breweries and much domestic work. He had been surveyor to the Halifax Building Society for the last 30 years.

In 1943 Mr. Meakin took into partnership Mr. T. H. S. Meakin [*L*], who now carries on the practice.

William Pritchard [*Retd. A*] died on 16 July, aged 58.

Mr. Pritchard studied at Liverpool School of Architecture and after a period as assistant with Sir Edwin Lutyens—during which time he worked on the drawings for Government House, Delhi—he went to Liverpool Corporation in 1924. Here he was responsible for a wide variety of work, including the Childwall Valley High School for Girls, bus depots and offices, and Calderstones Park open-air theatre.

Harry Teather [*Retd. F*], past President of the South Wales Institute of Architects, died on 14 October, aged 88.

Mr. Teather was articled to the late C. J. Innocent [*F*] of Sheffield and began practice in Cardiff in 1895. His practice covered a wide variety of buildings and extended throughout the whole of Wales and for some years he had a branch office in Shrewsbury. He built a large number of schools and colleges, many of them won in open competition; these included the Women's Training College, Barry, Harpur Adams Agricultural College, Newport, Salop, the Boys' High School, Cardiff, and county schools throughout Wales. His other works included mining schools at Treforest and Crumlin and drill halls at Barry, Caerphilly, Maesteg, Bridgend and Merthyr, a mining rescue station at Porth, commercial premises, hotels, clubs, factories and houses.

He was surveyor to the Diocese of Llandaff 1924–53 and for some years architect to the Glamorgan Territorial Army Association. He was a member of the Architects' Advisory Committe to Cardiff Rural District Council. During the First World War he was principal surveyor to the Munitions Works Board (South Wales Area) of the Ministry of Munitions. He took a keen interest in the Welsh School of Architecture from its inception and was an honorary lecturer. He was President of the South Wales Institute of Architects 1908–9, and served on the R.I.B.A. Practice Standing Committee.

George Pawson Stainsby [*F*], past Chairman of the Tees-side Branch of the Northern Architectural Association, died on 4 September, aged 66.

Mr. Stainsby served his articles in Stockton-on-Tees and after a period with the Durham County Council and with the Co-operative Wholesale Society in London set up in private practice in Stockton in the late twenties. He won two open competitions for school design—one for a school in Guildford, one (in partnership with Mr. J. English) for an open-air school at West Hartlepool. He was also responsible for the design of Newham Grange school and worked on the design of the new Stockton Grammar School. His practice also included much housing work for the Stockton Corporation before the war, hospitals, churches, offices, and factories for the North-Eastern Trading Estates Ltd. He was Chairman of the Tees-side Branch of the Northern Architectural Association in 1933.

Mr. Stainsby was a member of the Whitwell Lodge of Freemasons, a past President of Stockton Brethren and a member of Stockton Rotary Club and Stockton Cricket Club.

Alfred Gordon Robinson [*L*] died on 9 July, aged 60.

After spending five years with the Imperial War Graves Commission Mr. Robinson went to the London County Council in 1926. He remained with the Council, working principally on survey and valuation work, up to the time of his death.

William Lee Clarke [*Retd. F*] died on 23 September, aged 78.

Mr. Clarke after serving his articles with a Bristol firm joined the firm of Herbert O. Ellis, subsequently becoming a partner. After the First World War Mr. Ellis took a less active part than formerly and Mr. Clarke was responsible for the rebuilding of a large number of works and offices for the principal daily and other newspapers, including the DAILY EXPRESS building and Northcliffe House. He also built a number of printing works. In 1933 Mr. Ellis retired and Mr. Clarke was joined by Mr. W. L. Gallannaugh[*F*], the name of the firm being changed to Ellis, Clarke & Gallannaugh.

Mr. Clarke was an accomplished black and white artist.

Membership Lists

ELECTION: 11 DECEMBER 1956

The following candidates for membership were elected on 11 December 1956.

AS FELLOWS (6)

Franklin: Herbert James, A.A.Dipl. [*A* 1931].
Llewelyn Davies: Richard, M.A.(Cantab.), A.A.Dipl. [*A* 1939].
Sterrett: John Edwin [*A* 1923].
and the following Licentiates who are qualified under Section IV Clause 4, (*c*) (ii) of the Supplemental Charter of 1925:
Burr: Vincent.
Helbing: Vernon.
Jones: Maurice William, Worcester.

AS ASSOCIATES (41)

Ackroyd: Peter Rasmus, Dip.Arch. (The Polytechnic).
Ascott: Michael George, A.A.Dipl.
Ashley: Peter John, Dipl.Arch.(Northern Polytechnic), Lincoln.
Avann: Ivo, Dip.Arch.(The Polytechnic), Cheam.
Bigmore: David Geoffrey, Dipl.Arch.(Northern Polytechnic).
Bunker: John Vincent, Dip.Arch.(The Polytechnic), Richmond, Surrey.
Clapp: John Drummond, Dipl.Arch.(Northern Polytechnic), Loughton.
Clowes: Jack, Dip.Arch.(Sheffield), Stoke-on-Trent.

Collier: John, Dip.Arch.(The Polytechnic).
Dawson: Alexander John, D.A.(Dundee), Arbroath.
Duncan: Thomas, D.A.(Dundee), Perth.
Fawdon: Keith William, Dip.Arch.(Dunelm), South Shields.
Gilroy: Norman Thomas, Dipl.Arch.(Northern Polytechnic).
Gough: Anthony Darley, A.A.Dipl., Southsea.
Haggart: James Carr, D.A. (Dundee), Stanley.
Hatch: David George, D.A.(Edin.), Belfast.
Hatcher: David Anthony, A.A.Dipl., Ipswich.
Heward: Alexander, D.A.(Edin.), Newcastle upon Tyne.
Howard: Anthony Peter, Dipl.Arch.(Northern Polytechnic), Welwyn Garden City.
Ingoldsby: Colin Joseph, B.Arch.(N.U.I. Dublin), Clonmel, Co. Tipperary.
John: Edward William Warne, Dip.Arch. (Cardiff), Penarth.
Jones: David Morton, D.A.(Dundee), Belfast.
Kear: Kenneth Leonard, Dipl.Arch.(Northern Polytechnic).
Kennedy: George Raphael Michael, D.A.(Edin.), Stafford.
Kirtley: William Donald, B.Arch.(Dunelm), Sunderland.
Knight: Denis Stanley, A.A.Dipl.
McMorrow: John Henry Malcolm, A.A.Dipl., Hertford.
Meyersohn: E. Maurice, B.Arch.(Rand).
Morrow: Alexander George Hamilton, Dipl. Arch.(Northern Polytechnic), Killyleagh, Co. Down.
Nicholson: Robert Nicholas, B.Arch.(Dunelm), M.Eng.(L'pool), A.M.I.C.E., Workington.
Norris: John, Dipl.Arch.(Northern Polytechnic), Quorn.
Ogden: Michael John Hamp, Dip.Arch.(The Polytechnic).
Oxley: Kenneth Robert, B.Arch.(Dunelm), Darlington.
Penney: Allen, Bath.
Rhind: Robert Thomas, Dip.Arch.(Dunelm), Berwick-upon-Tweed.
Robson: Dennis William, B.Arch.(Dunelm), Consett.
Saunders: Peter, B.A.(Cantab.), A.A.Dipl.
Smart: Robert Mackenzie, Dipl.Arch.(Northern Polytechnic).
Swinney: Thomas Michael, B.Arch.(Dunelm), Morpeth.
Wilkinson: Denis Roland, Dip.Arch.(Dunelm), Sunderland.
Wilson: Donald Rule, B.Arch.(Dunelm), Newcastle upon Tyne.

AS LICENTIATES (2)

Haslam: John Dennis, Worksop.
Haslam: William Herbert Neville, Worksop.

ELECTION: 8 JANUARY 1957

An election of candidates for membership will take place on 8 January 1957. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 31 December 1956.

The names following the applicant's address are those of his proposers.

AS HON. FELLOWS (6)

Clark, Sir Kenneth, K.C.B., Saltwood Castle, near Hythe, Kent. Proposed by the Council.

Mountbatten of Burma: The Earl, Admiral of the Fleet, K.G., P.C., G.C.B., G.C.S.I., G.C.I.E., G.C.V.O., D.S.O., LL.D., D.C.L., D.Sc., Broadlands, Romsey, Hants. Proposed by the Council.

Sitwell: Sir Osbert, Bt., C.B.E., LL.D., D.Litt., F.R.S.L., Renishaw Hall, Renishaw, near Sheffield. Proposed by the Council.

Tedder: Lord, Marshal of the Royal Air Force, G.C.B., Well Farm, Banstead, Surrey. Proposed by the Council.

Warr: The Very Rev. Charles Laing, K.C.V.O., D.D., LL.D., Hon. R.S.A., Dean of the Thistle and of the Chapel Royal in Scotland; Minister of St. Giles Cathedral, Edinburgh; Chaplain to the Queen. Queen's House, Moray Place, Edinburgh 3. Proposed by the Council.

York: The Lord Archbishop of, The Most Rev. Arthur Michael Ramsey, D.D., Bishopthorpe, York. Proposed by the Council.

AS HON. ASSOCIATES (6)

Anderson: Sir Colin (Skelton), Admiral's House, Hampstead Grove, N.W.3. Proposed by the Council.

Betjeman: John, The Mead, Wantage, Berks. Proposed by the Council.

Logan: Douglas William, M.A., D.Phil., LL.D., D.C.L., Principal of the University of London. 48 Gordon Square, W.C.1. Proposed by the Council.

Piper: John Egerton Christmas, Fawley Bottom Farmhouse, near Henley-on-Thames, Oxon. Proposed by the Council.

Willink: The Right Hon. Henry Urmston, M.C., Q.C., M.A.(Cantab.), D.C.L.(Lambeth), The Master's Lodge, Magdalene College, Cambridge. Proposed by the Council.

Worboys: Walter John, 20 Albert Court, S.W.7. Proposed by the Council.

AS FELLOWS (6)

Astbury: Frank Nicholas, M.Sc.(Columbia), B.Arch.(L'pool) [*A* 1925], Messrs. Mitchells and Butlers, Cape Hill Brewery, Birmingham; 5 Selwyn Road, Edgbaston, Birmingham. Anthony Minoprio, H. W. Hobbiss, J. B. Surman.

Bartlam: Walter Ashley, Dip.Arch.(Birm.) [*A* 1949], 41 Moss Street, Elgin, Morayshire; 'South Villa', Elgin. A. Douglas Jones, T. M. Ashford, Herbert Jackson.

Bennett: Arthur Cyril, Dipl.Arch., Dip.C.D. (L'pool), A.M.T.P.I. [*A* 1934], 6 Abbey Square Chester; 4 Glan Aber Park, Chester. F. H. Brown, E. M. Parkes, F. C. Saxon.

Brashier: Michael Hugh, Dip.Arch.(The Polytechnic) [*A* 1948], 11 Gayfere Street, Westminster, S.W.1; Gayfere, Mark Way, Godalming, Surrey. R. B. Urquhart, E. C. Scherrer, H. C. D. Whinney.

Harrison: (Miss) Mary Reed, B.A.(Lond.) [*A* 1948], Shire Hall, Cambridge; 6 Cromwell Place, St. Ives, Huntingdonshire. Wilfrid Wingate, F. M. Harvey, Lord Mottistone.

and the following Licentiate who is qualified under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925:—

Moir: Neil Burke, Renfrew County Buildings, Paisley; 958 Cumbernauld Road, Glasgow, E.3. Frank Wood, F. R. Burnet, J. Bell.

AS ASSOCIATES (38)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Ager-Harris: James William, Dipl.Arch.(Oxford) (Sch. of Tech. Art and Commerce, Oxford: Sch of Arch.), The Lea, 94A Shinfield Road, Reading. Reginald Cave, Daydon Griffiths, F. T. Pritchard.

Appleyard: Donald, A.A.Dipl., A.R.I.C.S. (Arch. Assoc. London Sch. of Arch.), 82 Broadwalk, N.21. Arthur Korn, L. A. Culliford, L. A. Chackett.

Bennett: Denis Leonard (Special Final), The Old Forge, Churt, Farnham, Surrey. P. J. Mabley, B. W. H. Scott, C. E. Westmoreland.

Bishop: Brian John, Dipl.Arch.(Oxford) (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), 37 Mayfield Road, Swaythling, Southampton, Hants. S. E. Urwin, A. C. Townsend, Reginald Cave.

Bonham: Paul, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 54 Prospect Road, Moseley, Birmingham, 13. A. Douglas Jones, H. C. Bloomer, W. N. Hawkes.

Brown: Andrew Bolwell, Dipl.Arch.(U.C.L.) (Bartlett Sch. of Arch., Univ. of London), Franklin, Pillsmouth, Burnham-on-Sea, Somerset. Denis Clarke Hall, R. C. White-Cooper, Prof. H. O. Corfiato.

Button: Clive Derek, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 60 White Horse Hill, Chislehurst, Kent. J. S. Walkden, Frederick Gibberd, A. E. Kelsey.

Cuthbertson: John, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 'Hazeldene', Cheapside Lane, Denham, Nr. Uxbridge, Middlesex. J. S. Walkden, Peter Goodridge, J. S. Foster.

Darke: Geoffrey James, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), Brook House, Hampton, Evesham, Worcs. A. Douglas Jones, Herbert Jackson, T. M. Ashford.

Dent: John Wilfrid, Dip.Arch.(Dunelm) (King's Coll (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 7 Central Avenue, Whitburn, Sunderland, Co. Durham. Prof. W. B. Edwards, Bruce Allsopp, J. H. Napper.

Dixon: Anthony Clive Spenlove, Dip.Arch. (Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 13 Montagu Avenue, Gosforth, Newcastle upon Tyne, 3. Bruce Allsopp, F. A. Child, F. Fielden.

Freeman: Geoffrey Paul, B.Arch.(L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 4 Bentley Road, Liverpool, 8. Prof. R. Gardner-Medwin, Prof. H. M. Wright, William Ellis.

Holt: John Brian, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 'Kelvinside', 22 South East Crescent, Sholing, Southampton. A. Douglas Jones, T. E. North, J. B. Brandt.

Luker: Raymond, Dipl.Arch.(U.C.L.) (Bartlett Sch. of Arch.: Univ. of London), 'Yelrena', 3 Bitterne Way, Bitterne, Southampton. Prof. H. O. Corfiato, R. C. White-Cooper, Thomas Ritchie.

McGregor: Thomas Aloysius, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), 9 Inchcape Road, Arbroath, Angus. John Needham, W. G. Dey, Esme Gordon.

Marsh: Arthur Leslie, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 43 St. Bernards Road, Olton, Birmingham. A. Douglas Jones, T. M. Ashford, S. T. Walker.

Miler: (Mrs.) Janet Josephine, B.A.(Arch.) (Lond.) (Bartlett Sch. of Arch.: Univ. of London), Vieni, 14 Worrin Close, Shenfield, Essex. Prof. H. O. Corfiato, C. S. Jaques, H. R. Bird.

Milne: (Miss) Sheila Mary, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 7 Morningside Gardens, Aberdeen. D. J. A. Ross, E. F. Davies, G. A. Mitchell.

Milton: Kenneth Hugh, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 'Hams Barton', Lower Road, Chalfont St. Peter, Bucks. J. S. Walkden, J. S. Foster, Peter Goodridge.

Morgan: Llewellyn (Passed a qualifying Exam. approved by the R.A.I.A.), 8 St. Peter's Square, W.6. A. S. Gray, W. H. Watkins and applying for nomination by the Council under Bye-law 3 (*d*).

Morris: Elwyn Sims, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 1 Empress Avenue, Woodford Green, Essex. J. S. Walkden, R. O. Foster, Lord Mottistone.

Pavey: Neville John, Dipl.Arch.(Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 24 Little Russell Street, W.C.1. T. E. Scott, S. F. Burley, C. G. Bath.

Phillips: Peter Paul (Final), 42 Tulse Hill, S.W.2. Horace Farquharson, D. H. McMorran, George Whitby.

Potter: Derek Gordon, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 34 Holders Hill Avenue, Hendon, N.W.4. A. S. Gray, W. H. Watkins, J. S. Walkden.

Pugh: Edward Brian, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 'Wyncott', Arbourne Gardens, Longden Road, Shrewsbury. A. Douglas Jones, T. M. Ashford, C. W. McIntosh.

Ramage: Thomas Muir Livingstone, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 236 Foulford Road, Cowdenbeath, Fife. E. Riss, J. R. McKee, Frank Wood.

Roberts: David Leslie, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 'Hillside', 56 Pilgrims Way East, Otford, Kent. J. S. Walkden, W. G. Farmer, J. S. Foster.

Roberts: Dennis Spencer, A.A.Dipl.(Arch. Assoc. (London): Sch. of Arch.), 45 King George Street, S.E.10. Arthur Korn, R. F. Jordan, E. Playne.

Szarowicz: Marian Jan Kordian (Final), 11 Kenton Street, W.C.1. G. R. Dawbarn, Alick Low, Miss G. W. M. Leverkus.

Talbot: Ian Howard, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 'Hindoostan', The Toll Office, Delamere Terrace, Paddington, W.2. J. S. Walkden, Frankland Dark, T. A. Eaton.

Thomson: Duncan Barrie, D.A.(Glas.) (Glasgow Sch. of Arch.), c/o Ellis, 2 High Street, Newport on Tay, Fife. Prof. W. J. Smith, L. W. Hutson, A. B. Campbell.

Toner: William McKnight, D.A.(Glas.) (Glasgow Sch. of Arch.), 266 Byres Road, Glasgow, W.2. Prof. W. J. Smith, William McCrea, Colin Sinclair.

Watson: Andrew Houston, D.A.(Glas.) (Glasgow Sch. of Arch.), 30 Tarbert Avenue, West Kilbride, Ayrshire. Prof. W. J. Smith, G. Steel, A. D. Cordiner.

Watts: Alan Peter, Dipl. Arch.(U.C.L.) (Bartlett Sch. of Arch.: Univ. of London), 326 Mayplace Road, Barnehurst, Kent. Frank Scarlett, Harold Greenwood, Prof. H. O. Corfiato.

Webster: John Michael, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 126 Southam Road, Hall Green, Birmingham, 28. A. Douglas Jones, G. A. G. Miller, Reginald Edmonds.

Wesolowski: Michael Josef, Dip.C.D.(L'pool) (Special Final), 79 Mortlake Road, Kew Gardens, Richmond, Surrey. Edwin Rice, Dr. R. Herz, Arthur Korn.

Whitbourn: Philip Robin, Dipl.Arch.(U.C.L.) (Bartlett Sch. of Arch.: Univ. of London), 'Ridgeway,' Badgers Mount, Sevenoaks, Kent. Prof. H. O. Corfiato, R. C. White-Cooper, T. E. Heysham.

Wood: Harold Richardson, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne, Sch. of Arch.), 6 Park Street, Willington, Crook, Co. Durham. D. McIntyre, M. Hayton, Prof. W. B. Edwards.

ELECTION 9 APRIL 1957

An election of candidates for membership will take place on 9 April 1957. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Friday 15 March 1957.

The names following the applicant's address are those of his proposers.

AS FELLOW (1)

Thorrold-Jaggard: William, B.Arch.(Auck., N.Z.) [*A* 1941], 20–22 Grey Street, Palmerston City, New Zealand; 9 Chaytor Street, Palmerston City. H. E. Phillips, S. G. Chaplin, Prof. C. R. Knight.

AS ASSOCIATES (5)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Billson: Edward Fielder, Jnr., B.Arch.(Melbourne) (Passed a qualifying exam. approved by the R.A.I.A.), 422 Collins Street, Melbourne C.1, Victoria, Australia. Prof. B. B. Lewis, Harry Winbush, J. F. D. Scarborough.

Drake: Arthur, A.S.T.C.(Arch.) (Passed a qualifying exam. approved by the R.A.I.A.), 'Woodgates,' Allambie Road, North Manly, N.S.W., Australia. Cobden Parkes, Prof. F. E. Towndrow, Prof. Denis Winston.

Gimesy: Oscar Andrew Tibor (Passed a qualifying exam. approved by the R.A.I.A.), 33 Tennyson Street, Sandringham, S.8, Victoria, Australia. Harry Winbush, Prof. B. B. Lewis, R. S. Demaine.

Longstaff: Ian Donald, A.S.T.C.(Arch.) (Passed a qualifying exam. approved by the R.A.I.A.), 2 Arnold Street, Killara, N.S.W., Australia. Prof. F. E. Towndrow, Prof. Denis Winston, Prof. H. I. Ashworth.

Schreiber: Juliusz Jan Wlodzimierz, B.Sc. (Arch.) (Glas.) (Glasgow Sch. of Arch.) School of Architecture, McGill University, Montreal, Canada. Prof. W. J. Smith, Ernest Barott, J. C. McDougall.

Notes from the Minutes of the Council

MEETING HELD 6 NOVEMBER 1956

Appointments. (a) *European Productivity Agency: Conference on Building Management: Rotterdam: R.I.B.A. Representative*—Howard V. Lobb [*F*]. (b) *Joint Committee on Materials and their Testing: R.I.B.A. Representative*—Frank Heaven [*A*] in place of Professor W. N. Thomas [*F*]. (c) *R.I.B.A. Architecture Bronze Medal: The South Eastern Society of Architects: R.I.B.A. Representative on Jury to consider Award*—E. Steward Smith [*F*], President, Berks, Bucks and Oxon Architectural Association. (d) *Code of Practice for Structural Use of Timber in Buildings*—F. L. Felgate [*A*]. (e) *Code of Practice for Brickwork*—D. J. Green [*F*] and R. N. Wakelin [*F*]. (f) *B.S.I. Committee CEB/12: Water for making Concrete*—Frank Heaven [*A*]. (g) *M/53: Kitchen Tables and Stools for School Catering*—Mrs. G. M. Whitley [*A*] in place of G. Newell [*A*] (resigned). (h) *FSB/–: Fire Standards Committee*—Eric L. Bird [*A*]. (i) *B/91: Cork*—S. Vincent Goodman [*F*].

Direct Election to the Fellowship. Approval was given to a recommendation of the Royal Australian Institute of Architects that Mr. Oswald Victor Chisholm, F.R.A.I.A., Past-President of the Western Australian Chapter, should be elected to the Fellowship under the provisions of the Supplemental Charter of 1925, Section IV, Clause 4. Mr. Chisholm was elected accordingly.

Architectural Exhibitions. The Council accepted an offer from the French Embassy to provide an exhibition of contemporary French architecture to be shown at the R.I.B.A. in February and March 1957. The offer of the Finnish Embassy to provide an exhibition of Finnish architecture to be shown in April 1957 was also accepted.

Donation to Completion of Premises Fund. The Honorary Treasurer reported that a donation of five guineas to the Completion of Premises Fund has been received from the City and Borough Architects' Society. The Council expressed their appreciation.

Membership. The following members were elected: As Fellows 8, as Associates 55.

Students. 47 Probationers were elected as Students.

Applications for Election. Applications for election were approved as follows: *Election* 11 *December* 1956. As Fellows 6, as Associates 41, As Licentiates 2. *Election* 5 *March* 1957 (*Overseas Candidates*). As Fellows 3, as Associates 4.

Resignations. The following resignations were accepted with regret: Mrs. Enid Lea Coleman [*A*], Hubert Victor Cowley Curtis [*L*].

Applications for Transfer to Retired Members' Class under Bye-law 15. The following applications were approved: As Retired Associate: Robert David Robson. As Retired Licentiates: Edward Ernest Hall, Norman John Charles Petrie, Harry Oswald Warren Roberts, Frank Arthur Varney.

Obituary. The Secretary reported with regret the death of the following members: Robert Frederick Bargman [*F*], Arthur Clayton [*F*], Frank Wardel Knight [*F*], Horace Walter Parnacott [*F*], Harry Teather [*Retd. F*], Alan St. Hill Brock [*A*], Gilbert Henry Cotton [*A*], Clive Aubrey Lushington Morant [*A*], Richard John Vernall, O.B.E., V.R.D. [*A*], William Pritchard [*Retd. A*], William Caparne Baldry [*L*], Sidney Boundy [*L*], James Dallas [*L*], William John Green [*L*], John S. D. Hicks [*L*], Thomas Reginald John Meakin [*L*], Alfred Gordon Robinson [*L*], Edward Phillips [*Retd. L*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. D. C. Simmonds [*A*] has been appointed visiting lecturer at the Northern Polytechnic in the Law of Dilapidations, the Law of Contract and the London Building Acts for R.I.C.S. students.

Mr. A. E. Weddle, Dip.T.P. [*A*] has taken up an appointment as lecturer in Landscape Design in the University of Liverpool Department of Civic Design.

PRACTICES AND PARTNERSHIPS

Mr. Gordon Appleby [*A*] has begun practice at Central Chambers, Albury, N.S.W., Australia. His private address remains 726 Sackville Street, Albury.

Messrs. W. S. Hattrell and Partners [*F*/*A*] of 1 Queen's Road, Coventry, and 14 Hanover Square, London, W.1. have now opened a branch office at 15 Piccadilly, Manchester 1 (Deansgate 8288) where they will be pleased to receive trade catalogues, etc.

The partnership existing between Mr. John D. Maidment [*L*], Mr. G. E. Maynard, F.R.I.C.S. and Mr. J. T. Clarke, F.R.I.C.S. under the name of **Holmes, Son, Archer and Maidment** is being dissolved by mutual consent on 31 December. **Mr. John D. Maidment** will take over the practice as from 1 January under the style of John D. Maidment at Pembroke House, Palmerston Road, Sheffield 10. The present association existing between Mr. Maidment and Gerald Maynard & Co., Chartered Surveyors, will be continued.

Messrs. Howard, Souster & Fairbairn have taken into partnership Mr. I. Avann, **Mr. F. C. Newton,** T.P.Dip.[*A*] and **Mr. F. W. Wilson** [*A*].

Mr. S. G. Howitt [*L*] has recently begun private practice at 75 Queen's Road, Clifton, Bristol 8, and has taken into partnership **Mr. J. C. Hector** [*A*]. The firm will practise as **Howitt & Hector** and will be pleased to receive trade catalogues.

Mr. Arthur M. Leon [*L*] has now retired from practice and his present address is 2 Beach Road, Penarth, Glam.

Mr. Cecil Lush [*A*] has taken into partnership **Mr. Alfred W. Lester** [*A*]. The practice will continue from Craven House, 121 Kingsway, London, W.C.2 (CHAncery 2332) under the title of **Lush & Lester.**

Mr. C. B. Martindale [*F*] (J. H. Martindale & Son) of Cathedral Chambers, Castle Street, Carlisle, and Moor Yeat, Wetheral, Cumberland, has opened a further branch office at 2 Assheton Road, Beaconsfield, Bucks. (Beaconsfield 103).

Messrs. Paul Mauger & Partners have changed the name of the firm to **Paul Mauger, Gavin, Mathers & Mitchell.** The personnel of the firm remains as before, Mr. Paul Mauger [*F*] and Mr. George Mathers [*A*] practising mainly from 31 Church Street, Welwyn, Herts., and Mr. Alick Gavin [*A*] and Mr. John Mitchell [*A*] from 25 Marylebone Road, London, N.W.1.

Following the recent death of Mr. F. W. Pamplin [*L*] his practice is being continued by his son under the name of **D. J. Pamplin** [*A*] from the same address—5A Congress Road, London, S.E.2.

Mr. D. H. Seabrooke [*A*] has relinquished his position as architect to Messrs. Charrington & Co. Ltd., and has begun practice at 24 Tufton Street, Ashford, Kent, where he will be pleased to receive trade catalogues, etc.

Mr. B. G. Williams [*A*] has begun practice at 8 Arwenack Street, Falmouth, Cornwall, and will welcome trade literature, samples, etc.

CHANGES OF ADDRESS

Mr. Eric G. Bamsey [*A*] has changed his address to 114 Watling Street Road, Fulwood, Preston, Lancs.

Mr. J. L. Baynton [*A*] has changed his address to 17 Westminster Drive, Bromborough, Wirral, Cheshire.

Mr. John J. Bevan [*A*] has changed his address to 41 Gordon Square, London, W.C.1 (EUSton 6391).

Messrs. Michael R. Blampied & Partners [*A*] have changed their address to Museum Mansions, 63A Great Russell Street, London, W.C.1 (CHAncery 7209).

Mr Anthony Branson [*A*] has moved to 149 High Street, Sevenoaks (Sevenoaks 3436) where he will be pleased to receive catalogues, etc.

Mr. Leslie Chandler [*A*] has transferred his practice to 'The Shrubbery', Grove Road South, Southsea, Portsmouth, where he will be pleased to receive trade catalogues. The telephone number remains the same (Portsmouth 5913).

Mr. Geoffrey Green [*A*] has moved to 10 Makepiece Road, Bracknell, Berks.

The address of **Mr. Frank Greenwood** [*A*] is now F.P.W.D. (H.Q.), Lagos, Nigeria, W. Africa.

Mr. F. L. Hyett [*A*] has changed his address to 64 High Street, Wimbledon, S.W.19 (WIMbledon 2704).

Mr. Leonard Jacobs [*A*] has changed his address to Flat 5, No. 4 Eliazar Hochorani Str., Tel Aviv, Israel.

The address of **Mr. J. N. Johri** [*A*] is now Town Planning Department (where he is Senior Architect), 7 Bandariabagh, Lucknow, U.P., India.

From 1 January the address of **Mr. A. O. Kind** [*A*] will be c/o Messrs. May & Partners, P.O. Box 2418, Mombasa, Kenya, E. Africa.

Mr. Kenneth S. Long [*A*] has changed his address to 23 Greystoke Avenue, Austin Farm, Eggbuckland, Devon.

Mr. Charles Hewitson MacKeith [*F*] and **Mr. Frank Marshall Dickinson** [*L*], practising as **MacKeith, Dickinson & Partners,** have changed their address to 4 South King Street, Blackpool.

Mr. J. M. McLachlan [*A*] has moved to 33 Boxalls Lane, Aldershot, Hants., where he will be pleased to receive trade catalogues, etc.

Mr. R. H. P. Marshall [*A*] has left England for Montreal, where he has taken an appointment with Messrs. Lawson & Betts, and his address is now 532 Merton Avenue, St. Laubert, Montreal, P.Q., Canada.

The home address of **Mr. Laurence J. Perlston** [*A*] is now 5 Mount Lodge, Shepherds Hill, Highgate, N.6.

Mr. Martin Podd [*A*] has changed his address to The Square House, Broadway, Worcs. (Broadway 2157).

Mr. M. H. Shepheard [*A*] has moved to 10 Worth Park Drive, Three Bridges, Crawley, Sussex.

Mr. A. K. Sutton [*A*] is now at Apt. B.13, Court 4, 415 Lakeshore Road, Toronto 14.

Mr. R. A. Wood [*A*] is now at 'Pantiles', 8 Sandhurst Way, Sanderstead, Surrey.

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Mr. Oluwole Olumuyiwa [*A*], who was awarded a Swiss Government Fellowship last summer for a year's practical training in hospital planning, will be pleased to receive trade and technical literature etc., relating to hospitals. His address is c/o Architektengemeinschaft für das Kantonsspital-Projekt in Zürich, Limmatquai 4, Zürich 1, Switzerland.

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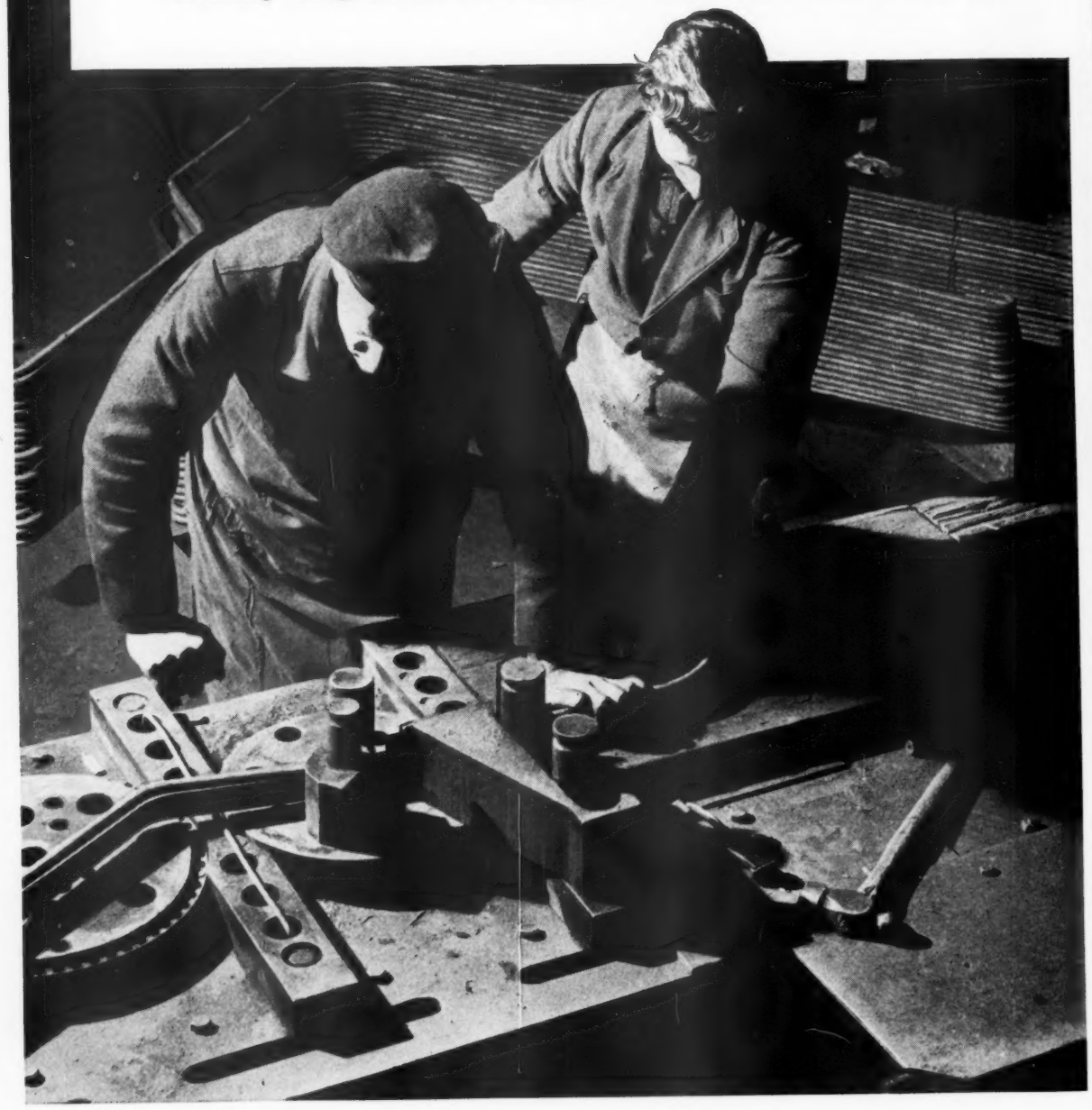

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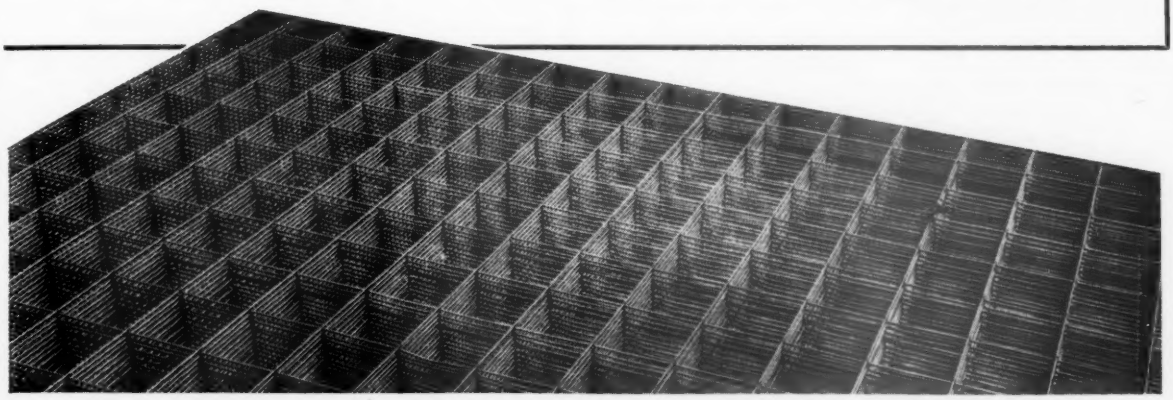

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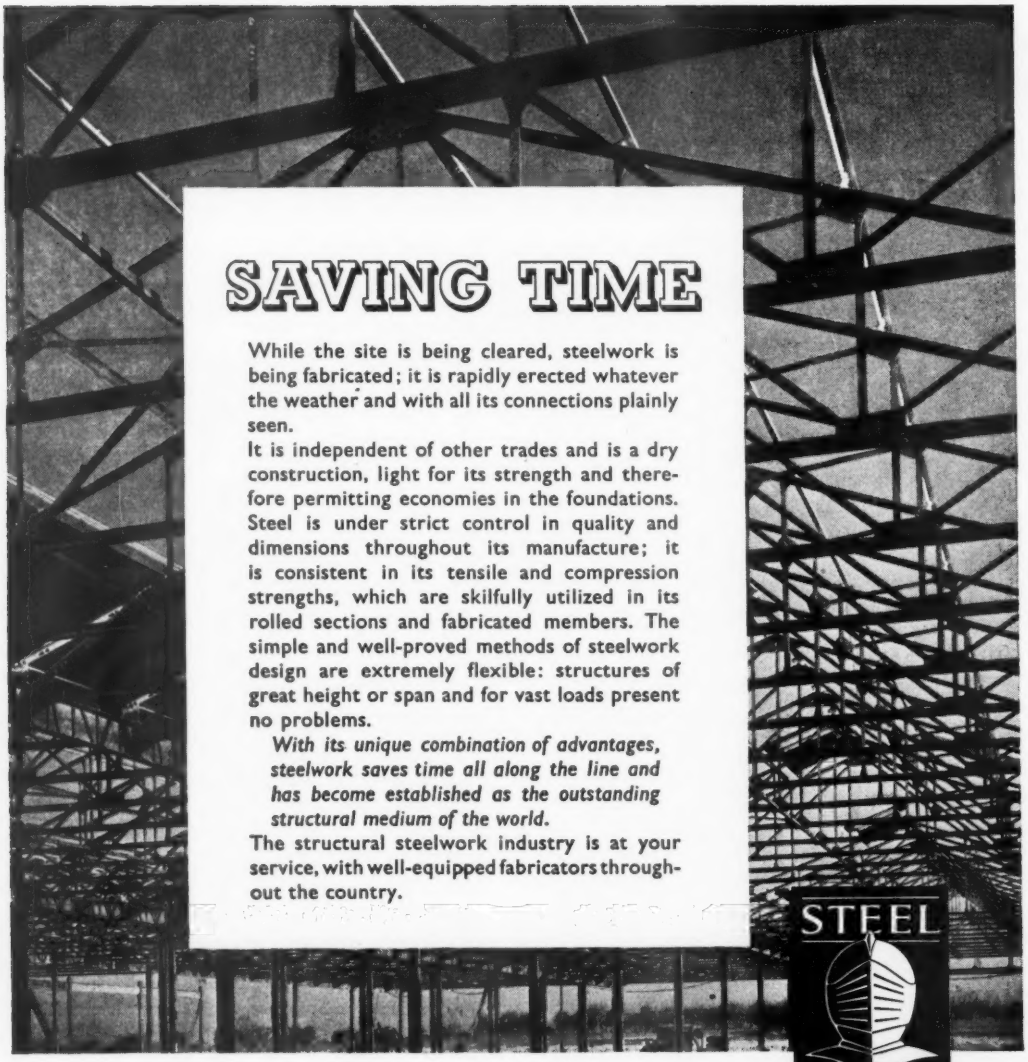

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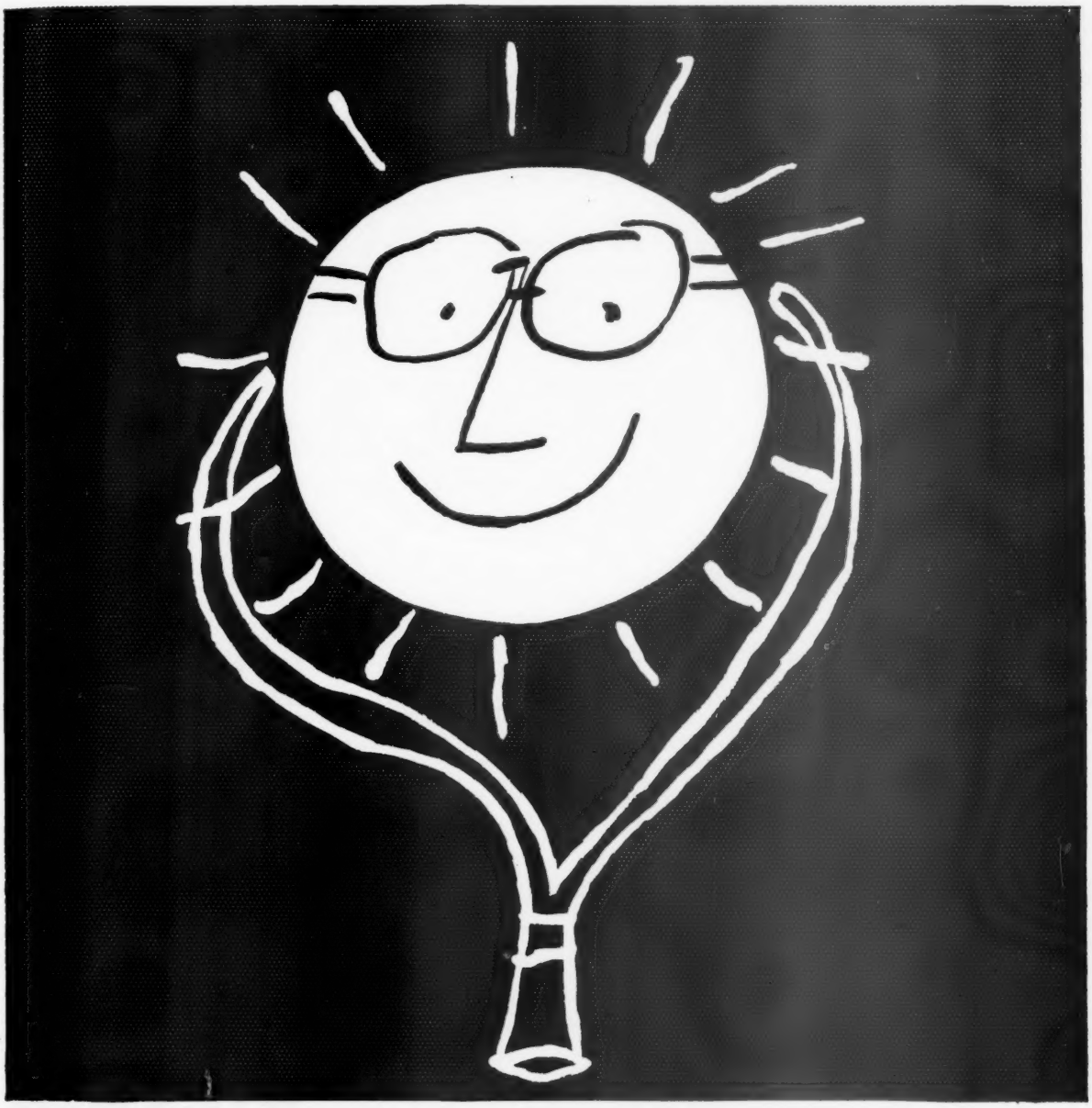

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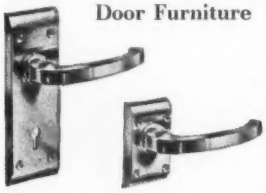

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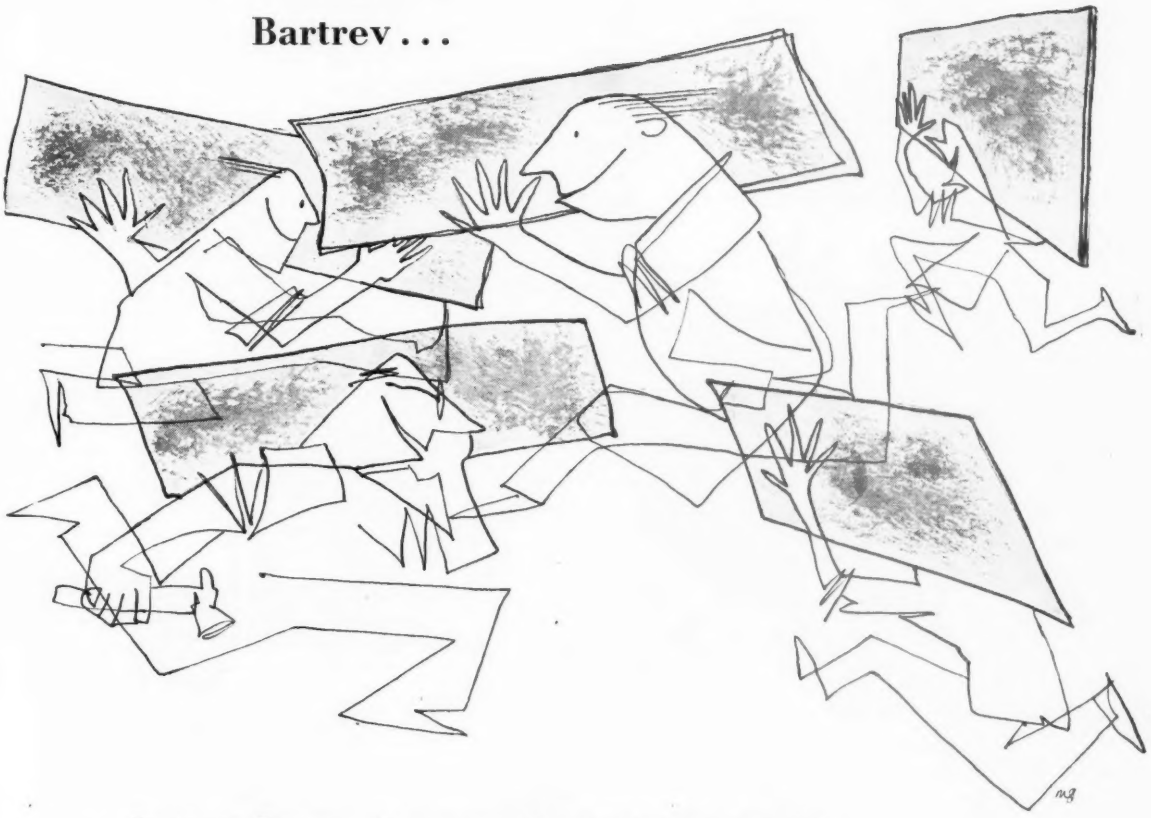

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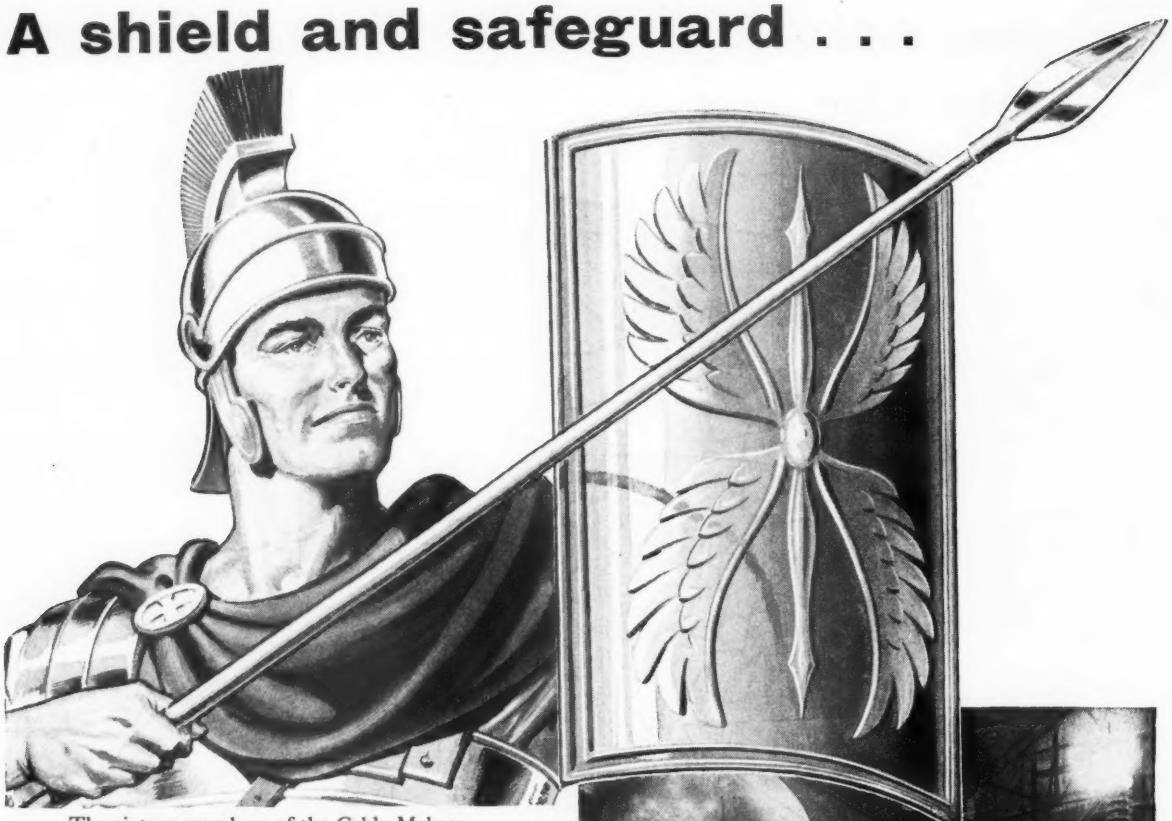

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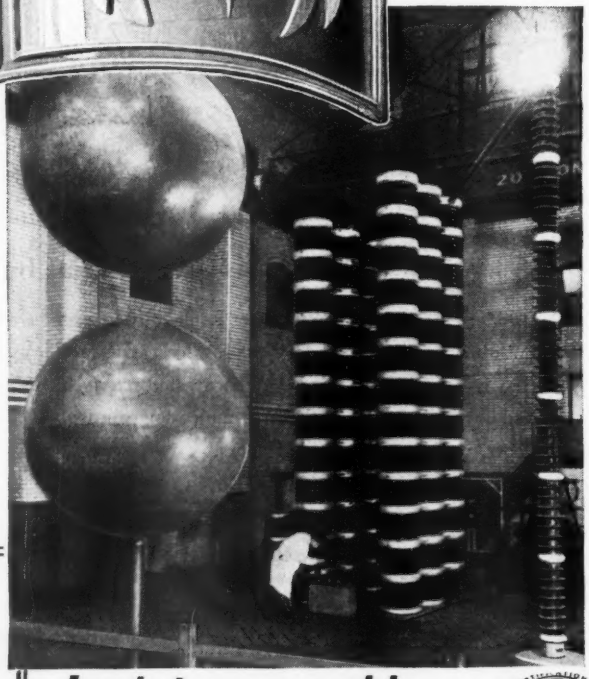

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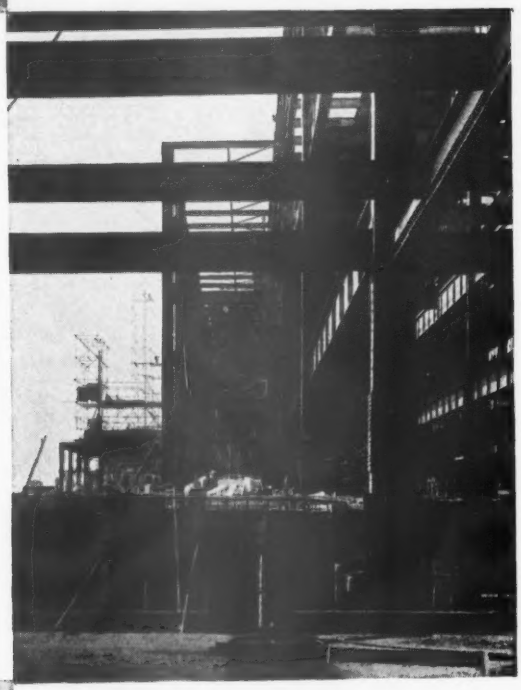

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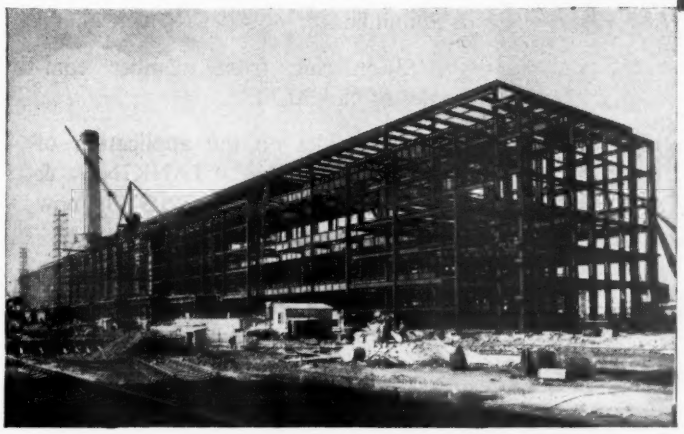

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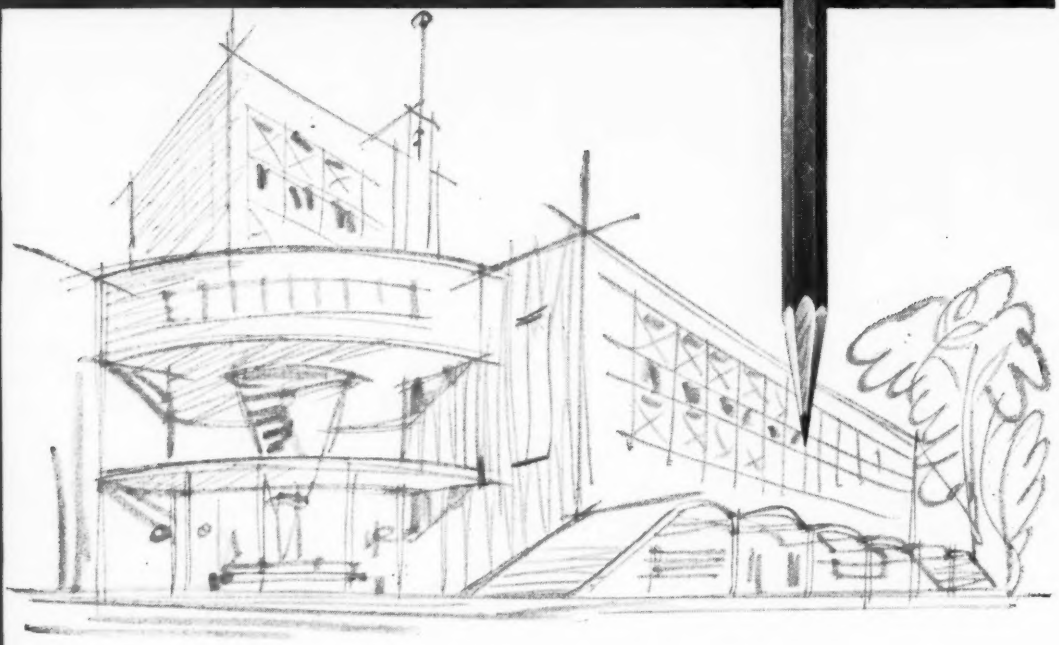

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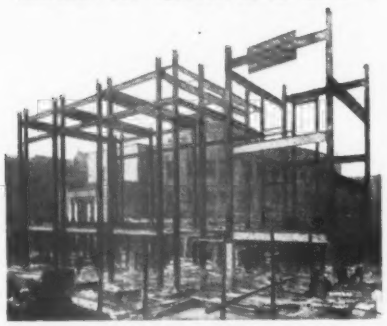

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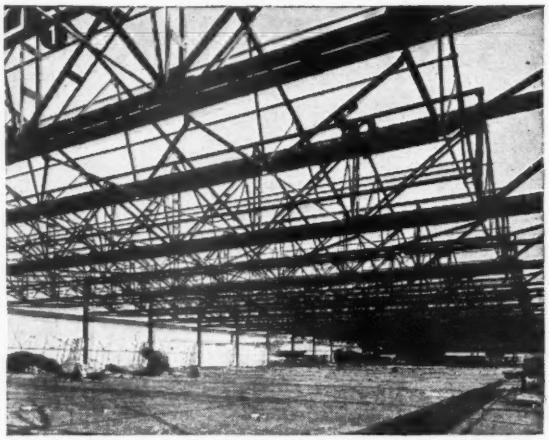

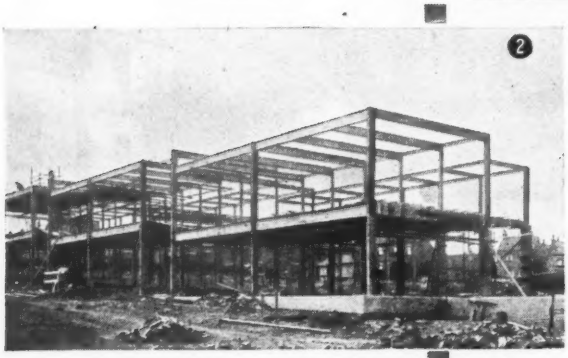

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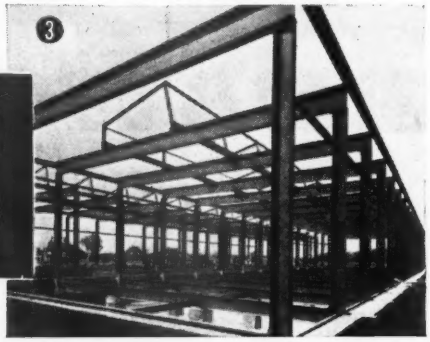

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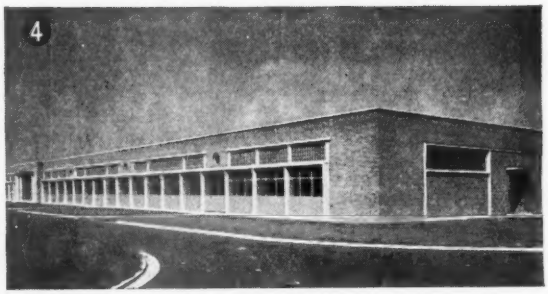

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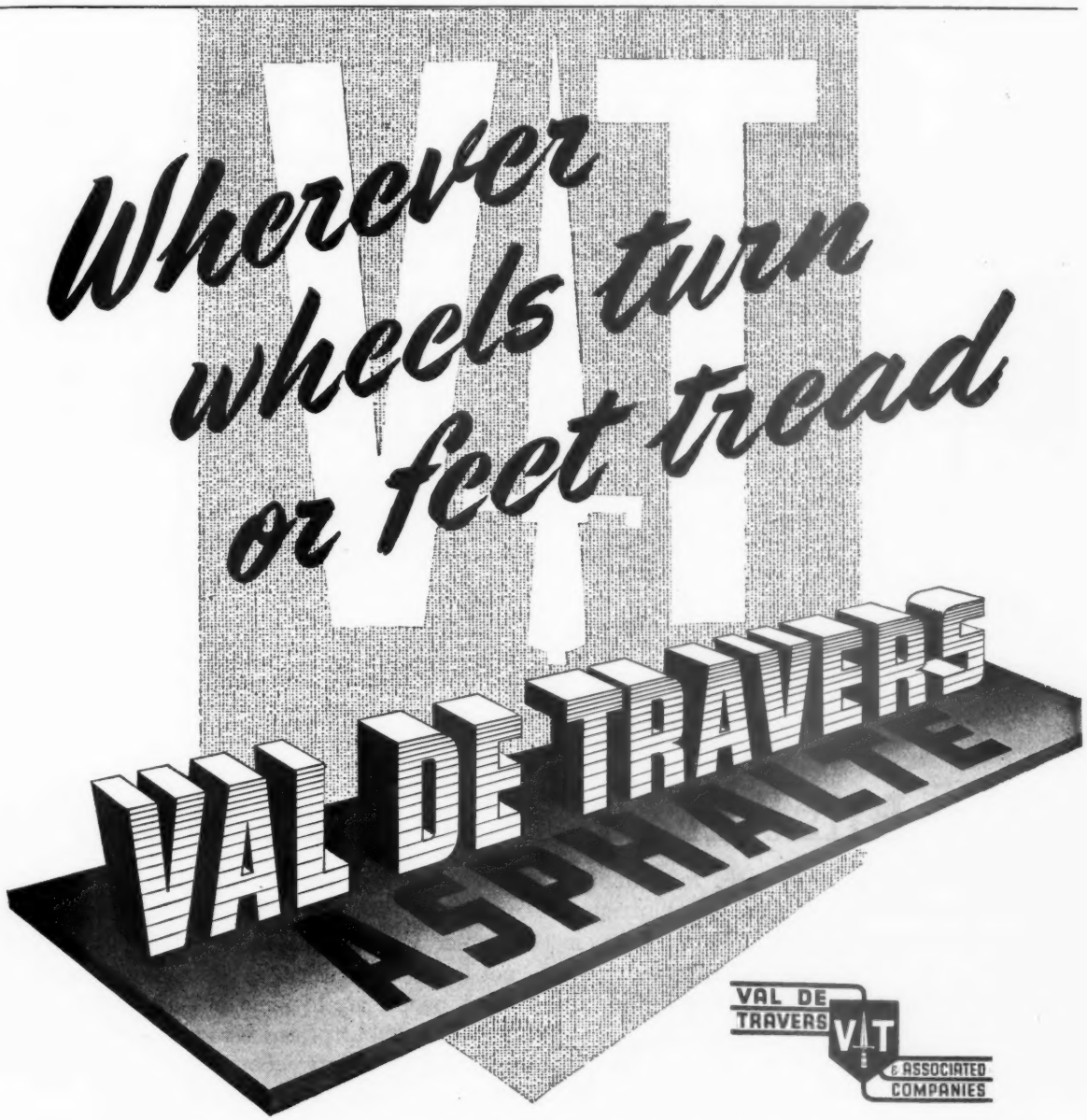

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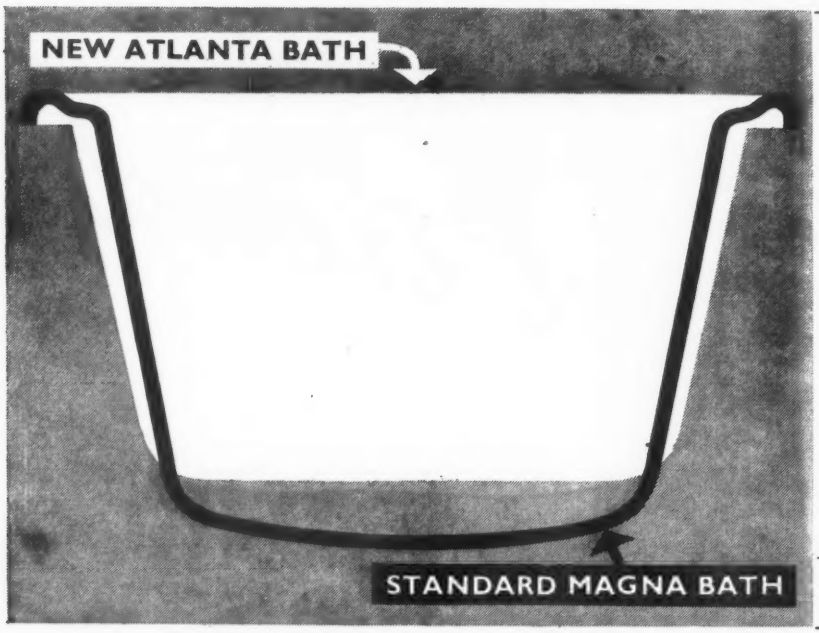

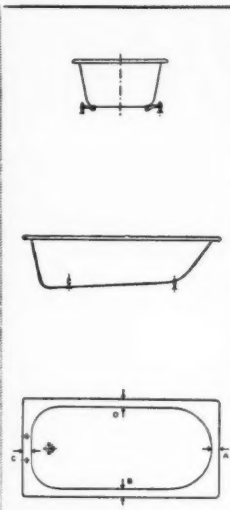

TYPE	5' 1"	5' 6"
Outside length	5' 1"	5' 6"
Outside width	2' 4¾"	2' 4¾"
Inside length	4' 7½"	5' 0½"
Inside width	2' 0¼"	2' 0¼"
Inside depth	15¼"	15¼"
Roll		
A	2"	2"
B	2¼"	2¼"
C	3½"	3½"
D	2¼"	2¼"

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with adjustable feet - - - 17—21¾".
without feet - - - - - 15¾".

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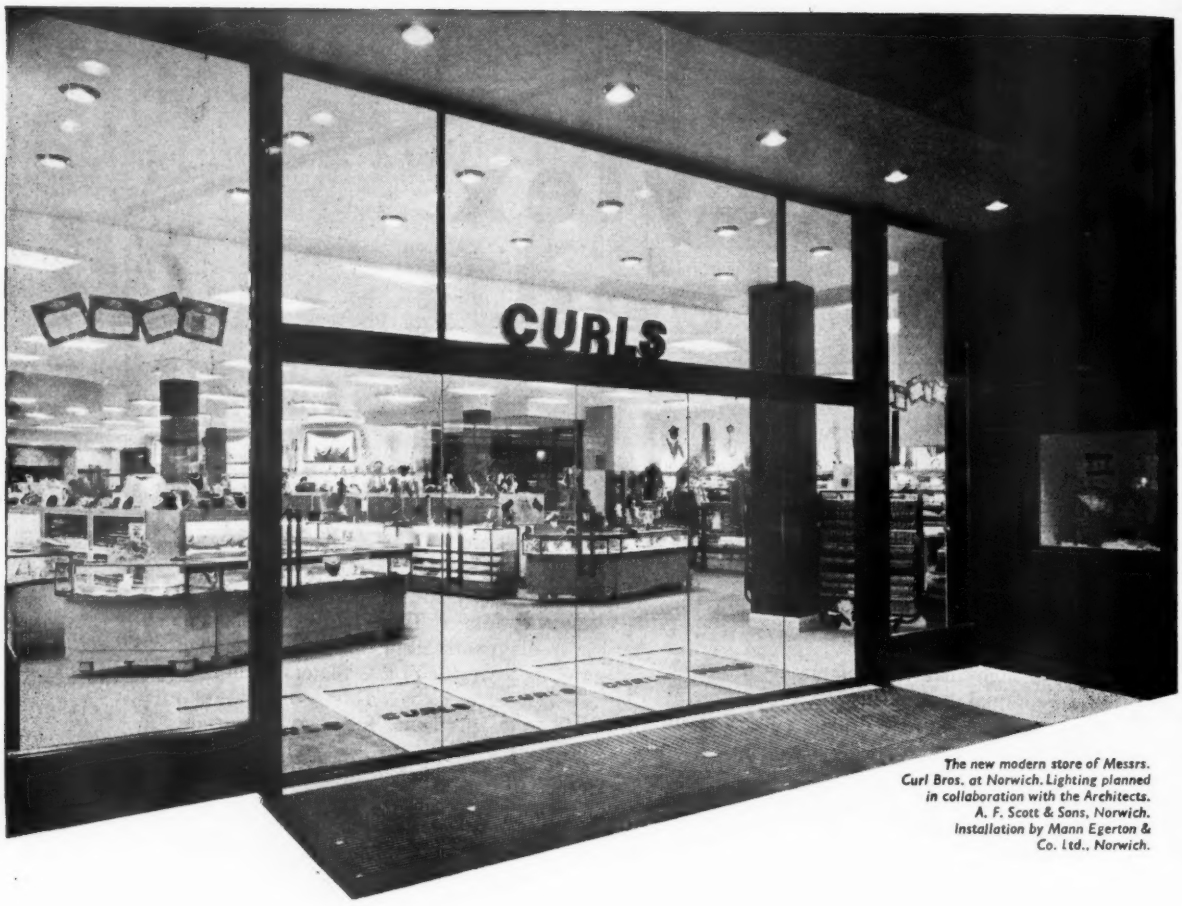

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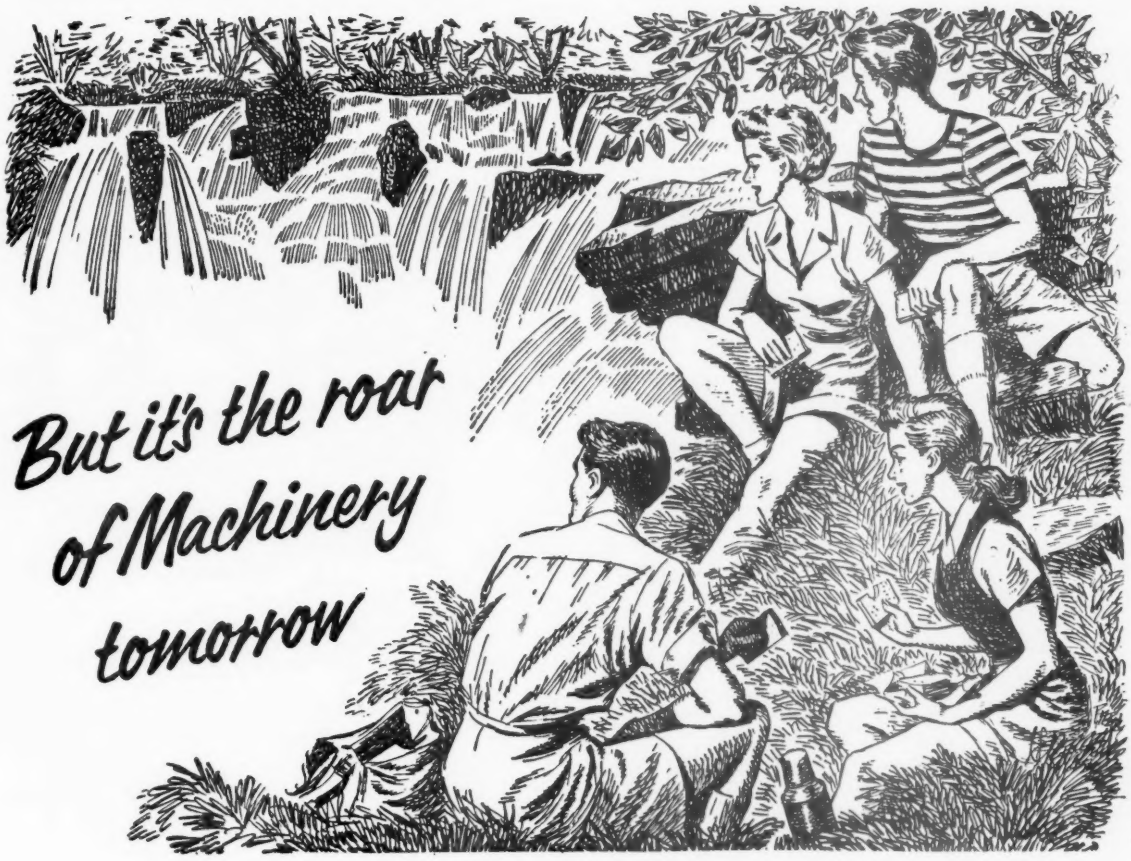

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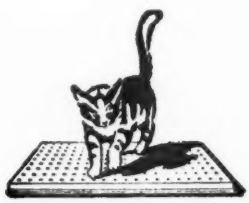

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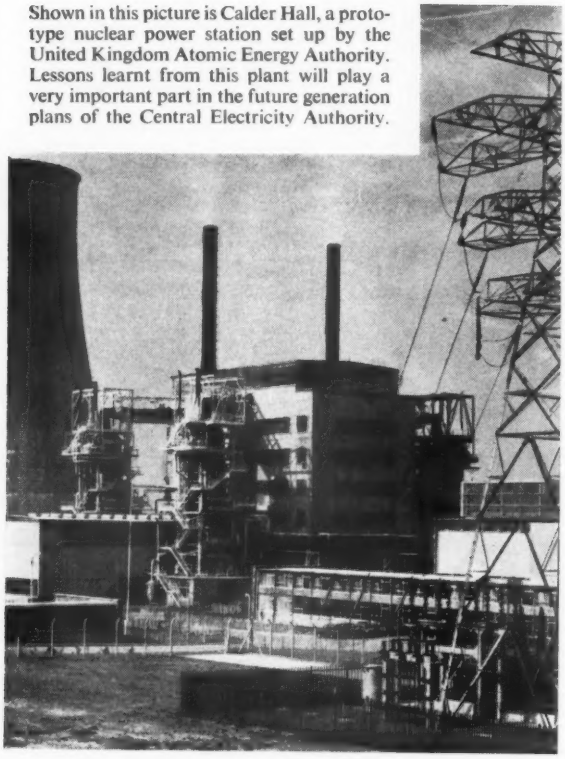
Electricity from Nuclear Energy

Shown in this picture is Calder Hall, a prototype nuclear power station set up by the United Kingdom Atomic Energy Authority. Lessons learnt from this plant will play a very important part in the future generation plans of the Central Electricity Authority.



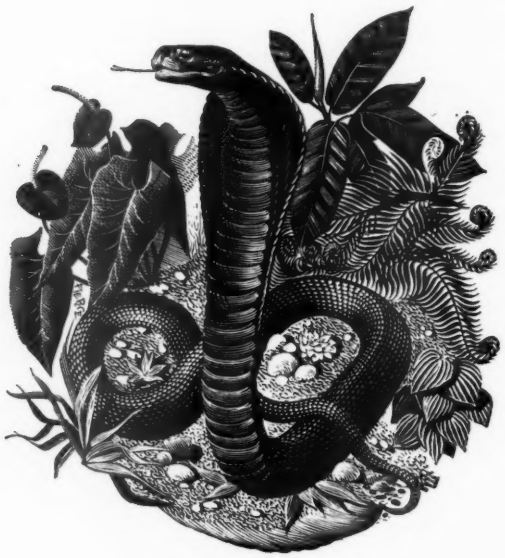
The growing need for power

Britain today is making an all-out drive for increased production, and as the pace quickens, so does the demand for power. In 1955, about one-fifth of the national coal output was used to generate electricity. The demand for power doubles every ten years and by 1965, 40 per cent of the estimated national coal output that year will be needed to keep up with the demand. Nuclear energy will do much to make up the difference between the need for electric power and the supply of home-produced coal.

Work will be started on the first two nuclear power stations in 1957, and by 1965 a total of 12 nuclear power stations, employing both gas- and liquid-cooled reactors, will be supplying current to the Grid. The rapid developments of the past 18 months have shown that the potential capacity of the earlier stations will be practically double the original estimate; this means that by 1965 we should be getting from nuclear power alone electricity equal to 10 to 12 million tons of coal.

As the demand for electricity grows, nuclear energy will become more and more important in supplying the power upon which the economic future of the country so largely depends.

CEA



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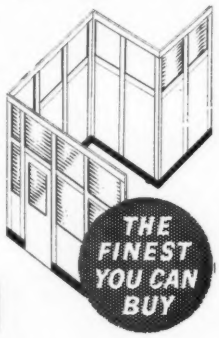

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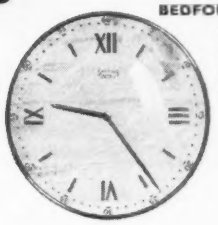

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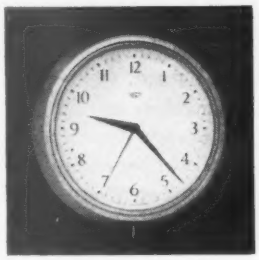

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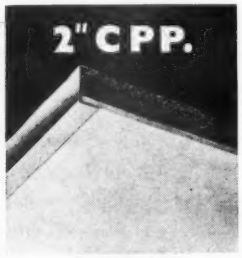

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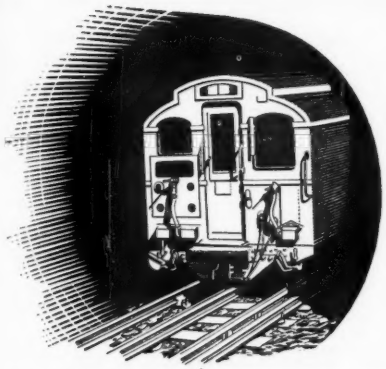

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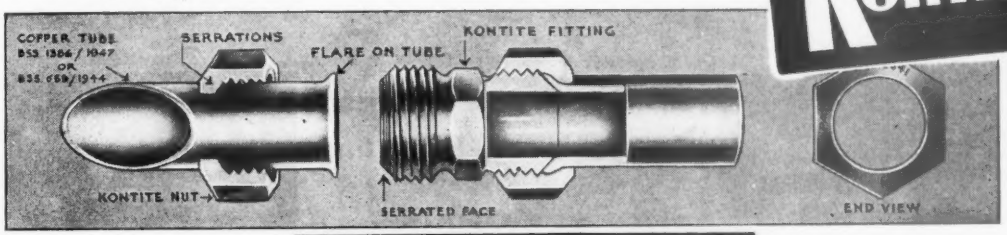

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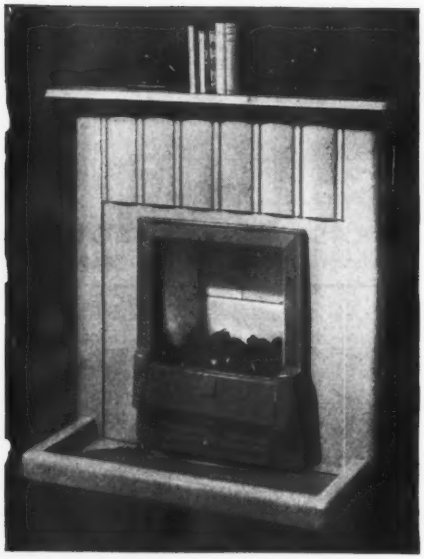

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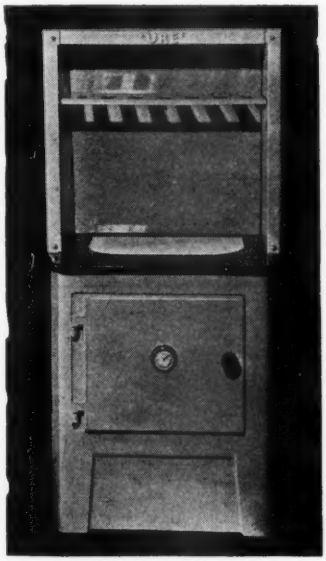

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LAING

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Building Research Station Digest
No. 95

DECEMBER, 1956

Questions and Answers

FLAKING OF PLASTER FINISHING COATS

Question: *I have experienced flaking and bulging of finishing coat plasterwork completed some 6—9 months ago. The defective work, distributed throughout a number of houses, is on clinker or breeze block walls and partitions; there are no cases of trouble on brickwork. Some replastering of the finishing coat has already been carried out but difficulty was experienced owing to the high suction of the undercoat. I would be interested to know whether any reason can be suggested for the trouble and whether further trouble is likely to develop.*

Answer: While large areas of clinker or breeze blockwork are successfully plastered, defects similar to those described are frequently reported to the Station and a number of them have been investigated.

The usual cause is the greater drying shrinkage of the blockwork and undercoat plaster relative to the finishing coat. Clinker or breeze blockwork tends to shrink as it dries out, particularly if the blocks have not been matured for a long enough period, or if they are wet when laid. Plaster undercoats, especially of cement, lime and sand, then tend to shrink with the blockwork (whereas, when they are applied to clay brick or to blockwork that does not shrink appreciably, their shrinkage movements may be restrained). Little drying shrinkage occurs in finishing coats of gypsum plaster and consequently such finishing coats may break away from the undercoats and blockwork as the latter shrinks, resulting in hollowness and flaking. If the finish is very thoroughly keyed to the undercoat, only cracking may develop. Defects of this type have been mentioned previously in B.R.S. Digests Nos. 62 and 69. Where no trouble develops within about a year of plastering it is unlikely to occur later since by this time the greater part of the drying shrinkage of the background will normally have taken place.

In repairing the plasterwork, a satisfactory result should be obtained on applying a new finishing coat to the existing undercoat, though it is best to delay this work as long as possible. Care should be taken to clean down the undercoat, particularly ensuring the removal of dusty particles, and it may be desirable to re-score it. If the suction of the undercoat is found to be very high, the use of a finish of well soaked lime-putty and sand, with only a light gauging of gypsum plaster, will often be advantageous since this mix will have good water-retaining properties. Alternatively, an emulsion bonding-liquid could be applied to the undercoat before applying the finishing coat.

To avoid similar trouble in future the precautions described in B.R.S. Digest No. 52 should be taken in order to ensure that the blockwork has a low drying shrinkage and that it is not plastered until it has dried out.

STAINING OF NATURAL STONE

Question: *I have noticed signs of dampness, staining and efflorescence on the base course of several recently completed stone buildings. The effects are similar to those produced by rising dampness but since the buildings are new ones I assume that they have a damp-proof course though one is not visible. Would you please comment on this?*

Answer: Apart from the rare possibility of a defective damp-proof course it is likely that the

trouble has been caused by the damp-proof course being by-passed either by the pavement or ground being made up above the level of the damp-proof course or by the latter being covered with mortar.

The occurrence of these defects in new buildings shows the need to re-emphasize the comments and illustrations of Digest No. 20 (July, 1950) which called attention to the unsightly and harmful consequences of laying paving above the level of the damp-proof course or bridging the damp-proof course with mortar.

It is a requirement in most bye-laws that when a damp-proof course is provided in an external wall it should be at a height of not less than 6 in. above the surface of the ground adjoining the wall. This surface must be taken as the finished surface of any paving laid on the ground and not that of the ground itself. This requirement is intended not only to ensure that the damp-proof course is clear of the ground but also to help in reducing the amount of water which may be splashed from the paving onto the wall above the level of the damp-proof course during heavy rain. It is evident that frequently insufficient consideration is given to the probable level of the pavement when fixing the level of the foundations.

The other chief cause of efflorescence and staining on stonework above damp-proof course level arises from the not uncommon practice of stopping the damp-proof course about 1 in. from the face of the wall so that it can be concealed by pointing. The use of a dense and relatively impervious mortar for pointing defeats its object because such a mortar tends to shrink and fall out. A less dense pointing provides a bridge across which rising damp can by-pass the damp-proof course and reach the stonework above it.

There must be an impervious barrier across the full thickness of the wall. If the expedient of inserting a strip of lead or lead-cored bitumen felt at the outer edge is adopted in order to make the damp-proof course less conspicuous, it must be properly linked with the main damp-proof course material. When building in absorptive stone, however, the best procedure is to construct the base course in granite, slate or other equally impervious material in the manner illustrated in Fig. 4 of Digest No.20. This not only acts as a damp-proof course in itself but prevents the decay below damp-proof course level that is to be expected if absorptive stone is used in this position.

CLEANING OF NATURAL STONE BUILDINGS

Question: *In the course of cleaning some stone buildings with water, severe penetration has occurred, despite the precautions that have been taken to prevent entry of water through open joints, window sashes and other features likely to be vulnerable. Would you please suggest what modifications should be made in the precautions adopted so as to prevent such penetration occurring?*

Answer: The historic importance of the buildings warranted an inspection of the work, which was still in progress, and it was immediately apparent that excessive amounts of water were being used and that no satisfactory means had been provided of controlling the flow. The equipment was altered and jets using no more than two gallons an hour were fitted. With this the stone was cleaned as thoroughly as before and no water penetration occurred.

The practice of cleaning limestone buildings with fine sprays of water has become well-established, but it is not always appreciated by the operators or their clients that relatively small volumes will suffice to soften the deposits and enable them to be brushed off quite easily. The use of unnecessarily large volumes of water, besides causing inconvenience, is prone to lead to penetration of water through the walls, as in the instances described above, causing damage to interior decorations. One instance has been brought to notice where an outbreak of dry rot occurred following the cleaning of a building where the outer skin was unusually thin and permeable and the woodwork had previously been attacked by dry rot. The aim should be to reduce the amount of water used to a minimum. Watch should be kept for any signs of water penetration and jets should not be left unattended for long periods.

Questions are often asked about how much scraping, scouring or brushing can be permitted, the answer to which clearly depends on the condition of the stone to be dealt with and the importance of the building concerned. Where the stone is in sound condition, as it often is, the judicious use of bristle or soft wire brushes and wooden scrapers or careful scouring with a piece of soft sandstone will remove the superficial deposits as they become softened and materially hasten the cleaning operations without any detriment to the stone. Where the

stone is in a friable state, and the friable surfaces are worth retaining, only the lightest mechanical aid can be given and none but the most experienced and trustworthy operatives should be employed.

DECAYED TILING BATTENS

Question: *Two bungalows were erected in* 1929 *and roofed with concrete tiles on battens without underfelting or underboarding. In* 1946 *it was found that some of the tiling battens had so rotted that they were unable to support the tiles. The roofs were then stripped, a proportion of the tiling battens replaced with new timber and the roofs re-tiled using the original tiles. Recently it was found that further tiling battens had been affected by rot and were very weak. I have not heard of a case of tiling battens becoming rotted and am puzzled to know why they should be two occurrences in the same buildings. Could you let me know the reason for this?*

Answer: In view of the fact that the Station also had no previous experience of tiling battens becoming rotted when overlaid with concrete tiles, it was decided to visit the site and one of the bungalows was inspected.

An examination of the site showed that there were no unusual features in the surrounding area which might have caused the bungalows to remain wetter than usual, nor was there anything unusual in the way in which the bungalows were used by the occupants that might have caused excessive moisture to be present inside the roof space.

Samples of the tiling battens and the tiles were obtained for laboratory examination. It was confirmed that the battens had been affected by fungal decay, mainly wet rot, and it was fairly definitely confirmed that the battens affected on the second occasion were some of the original tiling battens. The tests on the tiles showed that they were very porous indeed and failed to pass the British Standard test for permeability to water. It was evident that rain falling on the tiles was able to pass through them in sufficient quantity to saturate the tiling battens and provide conditions conducive to fungal attack.

The re-use of the original tiles had allowed the decay of the tiling battens to continue. In course of time it is likely that the newer battens would have been affected and it was therefore recommended that the roof should be stripped, decayed battens removed and fresh tiles, conforming to the requirements of the British Standard, obtained for re-tiling.

There are two useful points to be noted in connection with this enquiry, one relating to diagnosis of building defects and the other to the value of British Standards. If, on the first occasion, it had been realized that the trouble was due to the use of very porous tiles, the subsequent trouble could have been avoided. On the second point, British Standard 473 (revised 1956) provides a safeguard against the use of porous concrete tiles but at the time these particular tiles were produced the British Standard had not been prepared. Although most of the tiles produced before the British Standard originally appeared in 1932 conform to the Standard, this particular consignment did not.

ALKALI ATTACK ON FLOOR SCREEDS

Question: *The edges of individual thermoplastic tiles laid on the ground floors of* 8 *houses have been pushed upwards. The tiles themselves do not otherwise appear to be affected but the screed immediately under the edges of the tiles has been reduced to powder. Could you please explain what has happened to the screed?*

Answer: An inspection was made of the houses which were found to have been built on ground made up with waste material from colliery tips while in addition the hardcore below the base concrete consisted of shale from the same source. The base concrete was made with Portland cement, reinforced because the ground had been made up. In most of the houses a Portland cement screed had been applied to the base concrete to receive a thermoplastic tile finish but in the houses in question high-alumina cement had been used instead of Portland cement so that the tiles could be laid sooner.

When the tiles were prised off the screed, it was found that they were not affected except for being bent upwards at their edges. The main part of the screed was firm and hard but along the lines of the joints of the tiles the screed was soft and powdery to its full depth, the width of the affected area being as much as 1½ inches in places. The base concrete did not appear to have been affected but it was found that the hardcore infilling beneath it was damp.

Examination of the powdered high-alumina cement screed showed that the high-alumina

cement had been attacked by alkalies. Instances of this are very uncommon since alkalies are not normally present in building materials in sufficient concentration to affect high-alumina cement.

In this particular case, however, it was considered that alkalies present in the hardcore, and possibly in the made-up ground, had been able to pass upwards in solution through the Portland cement concrete and had become concentrated along the lines of the joints of the tiled finish since it was at these points that evaporation could occur. The action of alkalies on high-alumina cement leads to a breakdown of the cement, accompanied by an appreciable expansion. This expansion had pushed the edges of the tiles upwards so that each tile became saucer-shaped.

As the base concrete was apparently unaffected and the houses in which a Portland cement screed had been used were also unaffected, it was recommended that it would be necessary only to take up the existing tiles and screed, to replace with a screed unlikely to be affected by alkalies and to finish with new tiles since those that had been on the floor had become too distorted for further use.

DAMP-PROOF COURSES IN PARAPET WALLS

Question: *I have inserted a damp-proof course of slates set in cement mortar in a parapet wall but despite this a certain amount of rain penetration into the brickwork below the damp-proof course is taking place. Could you please explain why this damp-proof course is not effective?*

Answer: This point has already been discussed in Digest No. 68 (1954). Good quality slates in cement mortar provide an entirely satisfactory damp-proof course against capillary rise of moisture, but neither slates nor dense bricks can be relied on to prevent downward movement of water which is what is required of damp-proof courses in parapet walls. Water can feed by gravity through the joints between the slates or the bricks and can run over the edges on the surface of the walls.

A continuous membrane damp-proof course with lapse or welts is needed in these situations.

Notes on Digest No.87

It appears from correspondence received about the answer on hardcore given in Digest No.87 that the statement about the presence of sulphides and sulphates gives an impression that blastfurnace slag is not a suitable material for hardcore in the majority of cases. However, as stated in the opening sentence, this material is widely used as hardcore and fill with complete success and it is only when used on a wet site that special consideration is needed. This qualification, of course, applies to some of the other materials mentioned.

Attention has also been drawn to the fact that many quarry owners are now able to offer a crusher-run stone and similar products for use as hardcore at prices that should prove economical in areas reasonably near the quarries.

(Prepared by the Building Research Station, Garston, Watford, Herts.)

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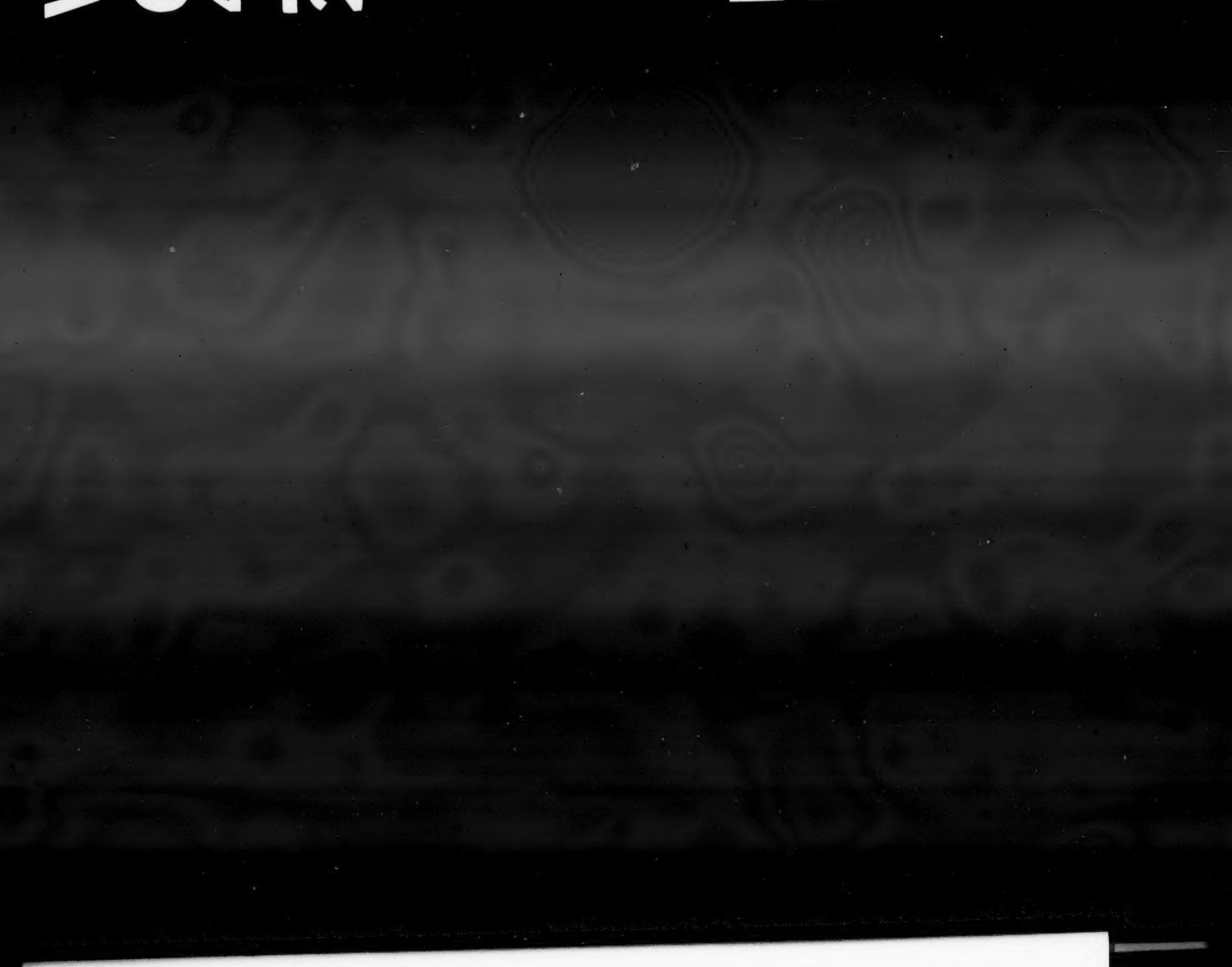
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